NATURALISTIC DECISION-MAKING FRAMEWORKS IN MULTIPROFESSIONAL ASSESSMENT OF EARLY CHILDHOOD DISABILITY

by

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ABSTRACT

Young children with complex developmental difficulties are often referred for assessment by multiprofessional groups run by health or education services. The purpose of this research is to identify and describe the frameworks within which such groups make their judgements and decisions in real work settings.

This study adopted an exploratory, multiple-case research design. It involved two tertiary multiprofessional groups in London. Each assessed two preschool children whose difficulties were suspected to lie within the autistic spectrum. One group consisted of a paediatric senior registrar, a clinical psychologist and a speech therapist working within a neurodisability centre attached to a hospital (Site M); the other group was multi-agency, managed by an Educational Psychology Service and included educational psychologists, a psychotherapist and the deputy head of a special school (Site E). Each child was assessed by all the professionals simultaneously in the presence of the parents over a morning session. All discussions were audio-recorded. Post-assessment interviews were held with each participant. Data were subjected to verbal protocol analysis and discourse and conversation analysis.

The major finding of the study was that professionals made use of four types of interlinked decision-making frameworks, activated either concurrently or in close alternation. Firstly, a common *procedural* framework included hypothesis testing and diagnosis carried out in three cycles of decision making, with varying characteristics related to the different institutional contexts of each Site. Secondly, *knowledge* frameworks were mainly within the 'disease' model at Site M, and the 'psychodynamic' and 'behavioural' models at Site E. Thirdly, *goal* structures were related to which client and purpose each assessment was intended to serve. Finally, *negotiation* frameworks consisted of inter-professional collaboration and power-game structures, and professional-parent interaction structures for negotiating the bad news. These findings have implications for research on decision making in assessment of children with disability, as well as for professional practice and training.

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ACKNOWLEDGEMENTS

This work has been significantly influenced by my three supervisors. My initial main supervisor, Prof. Klaus Wedell, then Chairperson of the Institute's Department of Psychology and Special Needs, made a great impact on my conceptualisation of assessment of disability as a sequential decision-making process. I also benefited from his breadth of vision on disability issues and his concern with "what is actually going on here". From Dr Ingrid Lunt, who was president of the European Federation of Professional Psychologists Associations during most of my Ph.D programme, I sharpened my awareness of problem-solving and decision-making processes in psychological practice and professional training, as well as of the group dynamic dimension in assessment. I also benefited from her appreciation of qualitative methods. Ingrid's and Klaus' support was essential for me to gain a quick understanding and access to multiprofessional practices in the UK. The scholarly rigour and wide knowledge of special needs and cognitive psychology of Prof. Julie Dockrell, who became my third supervisor on Prof. Wedell's retirement, greatly enhanced my appreciation of methodological issues while continuing to widen my vision on disability issues. I am grateful to all three supervisors for adjusting to the particular needs of my schedule of a mixed full- and part-time research programme. The constant discussions with my colleague research students during my presence at the Institute of Education enriched and sustained me on the long road of the research programme.

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KEY TO ABBREVIATIONS

NDM = Naturalistic Decision Making

CASES & SITES (for details see Table 6.2.5b, p.195; Figure 6.3.1, p.196):

M1 (Amy) = The first assessment at **Site M** (Medical site)
M2 (Betty) = The second assessment at **Site M** (Medical site)
E1 (Cathy) = The first assessment at **Site E** (Educational site)
E2 (David) = The second assessment at **Site E** (Educational site)

A = Amy (M1 Child)
B = Betty (M2 Child)
C = Cathy (E1 child)
D = David (E2 child)

DECISION MAKERS:

A = Advisor for special needs (Special school deputy head) at Site E
C1 = Clinical Psychologist in M1&2
C2 = Clinical Psychologist in E2
EP1 = Educational Psychologist (Originator and Facilitator) at Site E
EP2 = Educational Psychologist (Key worker for Site E1)
EP3 = Educational Psychologist (Key worker for Site E2)
EP4 = Educational Psychologist (Mentor for EP3 at Site E2)
F = Father
H = Head of nursery at Site E1
M = Mother
P = Paediatric Senior Registrar
S1 = Speech therapist in M1 & 2
S2 = Speech therapist in E1
T1 = Teacher in E1
T2 = Teacher in E2

TRANSCRIPTS (for details see Table 4.4.2a, p.124):

Prot.a = First professionals-only discussion protocol
  Prot.a1 = Brief all-centre professionals-only referral meeting (Site M only)
  Prot.a2 = Supplementary professional-team-only referral meeting (M1 only)
Prot.b = Second discussion Protocol: Interview with the Parents (Site M only)
  Prot.c = Third discussion Protocol: Planning assessment activity with child (M2 & E1&2)
Prot.d = Fourth discussion Protocol: Professionals-only evaluation of assessment results
  Prot.d1 = Professionals-only comments during first observation (Site E only)
  Prot.d2 = Professionals-only discussion after first observation (Site E only)
  Prot.d3 = Professional-parent comments during second observation (Site E only)
Prot.e = Fifth discussion Protocol: Concluding Parent Conference
Prot.f = Sixth discussion Protocol: Professionals-only Post-assessment Reflections

M1int.C / M / F / P / S = M1 post-assessment interview with C1/ M / F ...
E1int.EP1 / EP2 ... = E1 post assessment interview with EP1 / EP2 ...

SiteMpol.C1 = Interview with C1 on administrative policies at Site M - C1 was the clinical director of Site M;
SiteEpol.EP1 = Interview with EP1 on administrative policies at Site E - EP1 was originator/facilitator of Site E

X / XX = used instead of actual names of persons and places

***** = five-second pause in transcript extracts

Chapter 1

INTRODUCTION: RESEARCHING MULTIPROFESSIONAL ASSESSMENT OF EARLY CHILDHOOD DISABILITY

1.1. Introduction

This chapter presents the conceptualisation of assessment of early childhood disability as a socially negotiated decision-making task, which is best understood through naturalistic research.

- It introduces the focus of the study on professionals' decision-making frameworks in assessment of disability. Firstly, an account is given of the change of focus from issues of reliability and validity of testing to a concern with the effectiveness of assessment as a decision-making social event which is *sequentially* structured. Secondly, professionals' judgements and decisions are seen as being influenced by structures of *knowledge*, of assessment *goals*, and of *negotiation* contexts.

- Assessment of disability is then characterised as an *ill-structured* problem that is best studied through a naturalistic approach. It is placed within a new field of studies termed *Naturalistic Decision Making (NDM)* research. A rationale is given for the need to investigate professionals' decision-making frameworks through field study, focused on decision-making processes rather than outcomes.

- The conclusion gives a preview of the remaining ten chapters of the thesis.

1.2. Assessment as a decision-making event

1.2.1. Decision making as the function of assessment

Like my colleagues in the profession of educational psychology, I am constantly asked to give opinions and make decisions when parents or educators are concerned about particular children. They often ask: Is there anything wrong with this child? With his parents? With his class or school? Why is she like this? Will she catch up? Have I not taken good care of her? Why is the teacher not helping my daughter? Is there something else we could do for her? Can the school get more support for her? Should he attend that kind of school? Should she have that kind of intervention?

Decisions about all these questions are taken on the basis of an assessment of the child and his or her context of development and learning. Such assessments are an important concern of researchers because of the significant impact they may have on children's development:

> The assessment of students is a social act that has specific social and educational consequences. Those who assess students use assessment data to make decisions about the students, and the decisions can significantly affect an individual's life opportunities. Those who assess students must accept responsibility for the consequences of their work, and they must make every effort to be certain that their services are used appropriately. (Salvia & Ysseldyke, 1991, p.52)

1.2.2. Types of multiprofessional involvement in assessment of disability

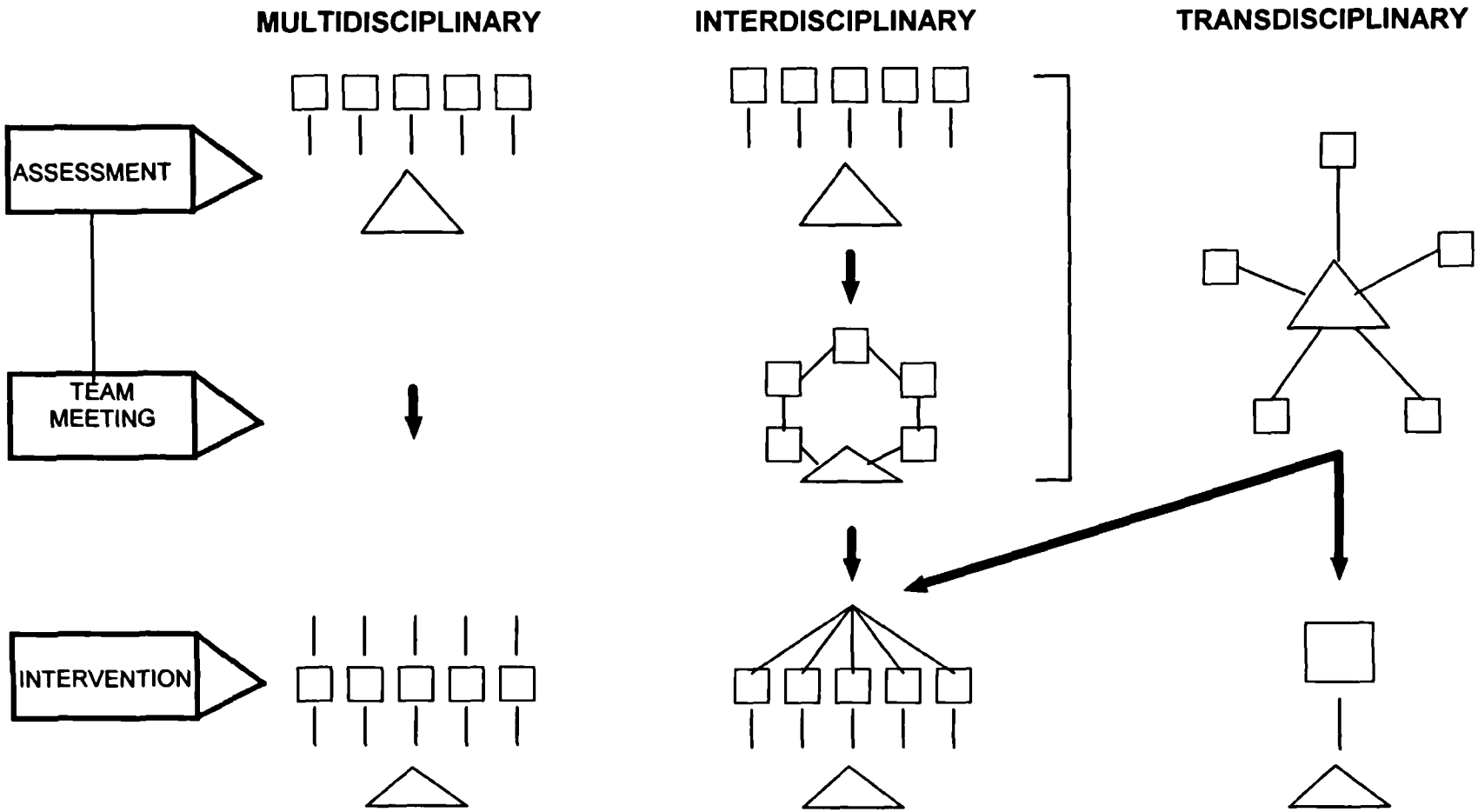
Assessments often entail the involvement of expertise from a variety of professionals from health and education and also social services. Multidisciplinary, and indeed multi-service involvement, is statutory for children to be given a formal Statement of Special Educational Needs in the UK (Davie, 1993).

Multidisciplinary involvement can take many forms (see Figure 1.2.2 below). Sometimes a variety of professionals may see the child and family individually, and then communicate with each other through reports or otherwise, but never actually meet to discuss the child and family. This informal collaboration is termed *multidisciplinary* (see left hand side of Figure 1.2.2, below).

Most often, however, a more formal *interdisciplinary* procedure is followed (see centre column of Figure 1.2.2, below): after seeing the child individually, professionals meet at a case conference where each one's findings are presented and interdisciplinary decisions may be taken. A set of priorities are agreed upon, and each professional then continues to work with the child individually.

Multiprofessional involvement is sometimes organised in an even more collaborative approach, termed a *transdisciplinary procedure* (see Bailey, 1984; Foley, 1990; Orelove & Sobsey, 1991; Lacey & Lomas, 1993; Myers, McBride & Peterson, 1996): *trans-* because the assessment role of each professional is carried out through another professional's interacting with the child. The major feature of this type of assessment is that professionals assess the child simultaneously together with the parents (see right hand column of Figure 1.2.2, below). This procedure is followed at some specialist centres, especially in the case of pre-school children. The child and family are asked to attend the centre for half a day; the parents and any professionals who are working with the child explain their concerns; one or more professionals, or the parents, play with the child while the rest observe; the professionals discuss their findings, first among themselves and then with the parents, making relevant recommendations and plans for supporting the child and family.

Figure 1.2.2: Different ways of organising multiprofessional assessment



Key: □ = professionals; △ = child & parents.

1.2.3. Field level decision making

Decisions reached by professionals in actual assessment of a particular child and family are significantly constrained by decisions about services for persons with disability and special needs taken at higher levels, namely at the legislative level, at strategic top management levels in health, education and social services, and at service section levels – for instance policies adopted by a particular Educational Psychology Service (see Evans *et al.*, 1989).

This study focuses on decision making at the ground level, where particular practitioners are engaged in making decisions about individual children and their families.

- It seeks to increase our understanding of practitioners' problem solving and decision-making processes in assessment of developmental disability.

- It focuses on multiprofessional groups from health and education engaged in transdisciplinary assessment of pre-school children.

- It attempts to describe the decision-making frameworks used by professionals in the field.

1.2.4. Assessment as a social interaction event

While this study is about assessment by a group of professionals, it is not about team work per se. This study will not focus on the distinction between assessment by an individual practitioner and assessment by a group of professionals. Rather it takes up the team work situation as a meeting place for a variety of professional perspectives. It highlights the social interaction dimension as an important characteristic of assessment of disability.

Even when assessment is carried out by an individual professional, this inherently involves at least the parents and/or the teacher in the assessment of the problem and recommendations for supporting the child. Moreover, in current practice in the UK, as well as in my home country, Malta, children are rarely seen by one professional only. Thus the issues that are being addressed in this study, though contextualised in transdisciplinary assessment, are really inherent in most assessments of disability.

1.3. Focus on two categories of decision-making frameworks in assessment

The problem solving and decision-making processes under study are multifaceted phenomena. They can be studied from a variety of perspectives, with a focus on one or other facet, and in a variety of ways. This study focuses on professionals' *decision-making frameworks*. Two categories of frameworks are seen as influencing the decision-making process in assessment:

- professionals adopt an explicit or implicit *procedural framework* through which they organise and process their search for judgements and decisions; and

- professionals activate prior *knowledge* and *interpretive frameworks* within which they develop an understanding of the nature of the presenting problem, its causation and future prospects, and the relevant remedial action.

1.3.1. Assessment as a sequential decision-making task.

This section presents the focus on assessment as a decision-making task as a relatively recent development. This focus needs to be distinguished from other approaches to assessment such as those highlighting psychometric testing. The view of assessment of disability as a sequential decision-making event is linked to studies on clinical reasoning in medical settings.

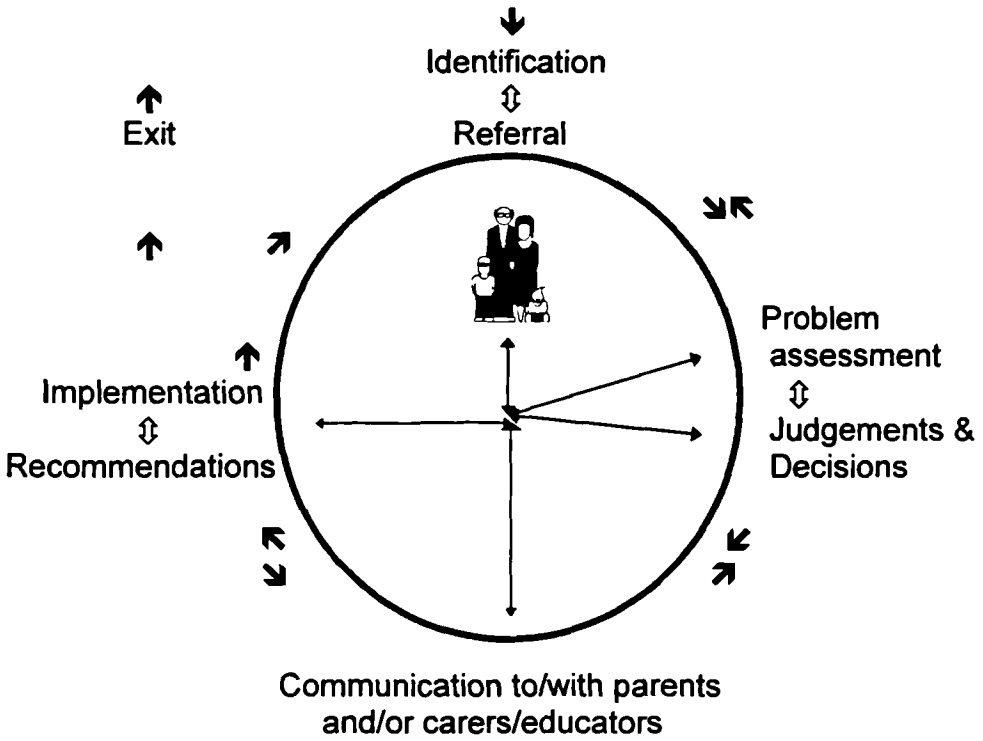
1.3.1.1. *Sequential versus separate processes in assessment*

The sequential process

The assessment event is here seen as a sequential series of actions taken by the professionals to understand the nature of the presenting problem and the way in which it can be addressed. Figure 1.3.1.1a, below, shows in a clockwise direction the main components in the process from identification of the problem to its resolution (child's exit from the support system).

The pre-school child is identified as causing concern for one reason or another by the parents, or the health visitor, or nursery personnel, or through a screening exercise. He or she is referred for assessment to an individual or group of professionals. The assessment may be carried out at a private clinic, or in a health, social services or educational setting; it may be completed over one or a number of sessions, and may involve one or a number of professionals in multi-, inter- or transdisciplinary procedures as described above. Different types of interaction with the child and parents may be entailed.

Figure 1.3.1.1a:
Sequential decision making in assessment of disability



The assessment involves the professionals in gathering information to understand the nature of the child's difficulties, and formulating judgements and decisions about the problem and possible relevant avenues of support for the child and family. These decisions are shared to some extent with the parents and other care or nursery staff, leading to agreed upon recommendations and plans for action. Supportive measures may either lead to the child being released as no longer requiring specialist support (exit), or the child and family may enter another cycle of referral to intervention when they, for instance, are referred to a specialist centre or other agency.

The actual sequence of activities may move to-and-fro along the referral to intervention cycle. Indeed the two-way lines within the circle in Figure 1.3.1.1a, above, joining Problem assessment, Judgements and Decisions to

Recommendations and Implementation and to parent participation, show that these are in constant interaction and possibly linked across as well as in sequence.

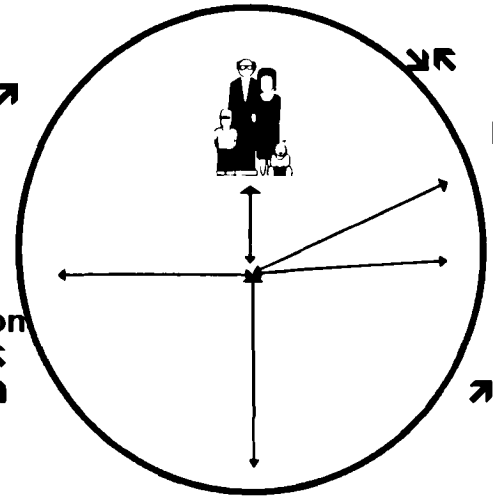
Moreover, the whole assessment cycle from referral to intervention may take place in one assessment session and the accompanying referral and ensuing written documentation. The whole cycle or parts of it may also recur within a single assessment event.

Separate aspects of assessment

Most prescriptive literature, as well as descriptive and explanatory research, is focused on separate aspects of the assessment, sometimes without any reference at all to the above sequential dimension. For instance, one might study the technical aspects of a test for autism, such as how reliable and how predictive it is of the child's future development, without relating these to what use can be made of the results for decisions about the child. On the other hand, one can investigate the weaknesses in the reliability and predictive validity of the same test to highlight its possible important negative impact on a child's future opportunities; or one can even investigate whether professionals make any use at all of test results or of other information in their decisions about the child. Thus separate assessment issues can be linked or not linked, or linked strongly or weakly, to the sequential decision-making process.

Figure 1.3.1.1b, below, shows in the text boxes attached to the sequential decision-making cycle, the kind of questions prescriptive and empirical research may address. The questions are stated in mandatory form, 'should', for simplicity. They can all be turned into questions for descriptive or explanatory research. They can all be studied as completely independent issues in assessment or as an influence on the sequential process of problem solving and decision making.

Figure 1.3.1.1b: SEPARATE ISSUES IN the sequential structure of problem solving and decision making in assessment of disability



Identification and referral:
- When should a child become a SEN concern?
- Who should identify and refer the child? (Should there be a screening service?)
- How and to whom should children be referred?

Exit:
- How far should aim be that children, once put on the Special Educational Needs register, be again struck off?

Problem assessment:
- What should be assessed? (Which child characteristics: physical, c cognitive, social, emotional, educational, child's holistic developmer as self organising entity?)
- What importance should be given:
  to child's history and influence of child's context – family, school etc.?
  to the search for causes of the child's disability?
  to predictions of the child's future development and needs?
- How should the assessment be carried out? Which tests, what criteria and how are they to be applied and interpreted?
- How should more than one professional be involved in th assessment? Should a multi- inter- or transdisciplinary procedure b used?
- How do different professionals and parents differ in their situatio assessment?

Implementation:
- How should recommendations be linked to intervention?
- How should it be ensured that recommendations are actually implemented? Why?

Judgements & decisions:
- What kind of judgements and decisions should be made? How shoul they be constructed?
- Should the child's difficulties be classified in some way? How far shoul one search for relating them to similar symptom clusters? How far should one search for similar symptom clusters in children? How should one use the diagnostic formulation if at all?
- Should decisions focus on context factors?
- Who should make the judgements and the decisions?
- How should they be reported?
- When and why are multi- inter- or transdisciplinary judgements and decisions required? And how are these different from individual decisions?
- How can professional judgements and decisions be reliable and valid?
- What information and goals should they be based on?
- Should they be influenced by factors apart from the child's difficulties?

Recommendations:
- What remedial action should be recommended and in what way? (e.g. Counselling for the parents and provision of contextual support to the family or school? Planning of medical treatment, therapy, or other strategies for bringing about changes in the child.)
- Who should make the recommendations?
- How should recommendations be determined?
- What should be the quality of recommendations? (e.g. Tied to psychometric scores? Culturally fair? Inclusive policy? Resource dependent?)

Communication to/with parents & carers/ educators:
- What role should parents have in the assessment and decision making and intervention?
- How should parent participation be promoted?
- Is there a place for parent advisers?
- What should parents' role be in multi- inter- and transdisciplinary assessment?
- Should the child be assessed in the presence of the parents?
- How should diagnosis be communicated to the parents?
- What use should parents make of legal proceedings?

Research on both separate and sequential aspects of assessment have their importance. However, this study highlights the approach that *changes the focus from the assessment as an entity in itself, to a focus on assessment as only one of the tools in the achievement of the goals of decision making for children with disability.*

1.3.1.2. From psychometric testing to decision making

Both in the prescriptive literature and in the field of psychological practice, there has been a gradual change of focus from psychometric testing to decision making.

Clinical and educational psychologists in the UK, for instance, up to the 1970s, had the role of psychometricians: within child guidance clinics they were mainly required by consultants to carry out IQ and other tests (see Herbert, 1990), a role which psychologists may still be expected to fulfil in hospital centres. However, the Educational Psychology Services which were set up in LEAs in the 1970s started taking a more decision-making role with regards to educational provisions for children in the schools. This role was greatly influenced by the Warnock Report (1978) which attempted to change the focus, from mere classification of students for exclusion to special schools, to a 'Statementing' process intended to determine children's special educational needs (SEN) in order to assign special educational provisions for meeting those needs. The subsequent 1981 Education Act gave educational psychologists statutory responsibility in the Statementing of children with SEN, thus giving them a gate keeping role for special provisions.

Educational psychologists thus adopted a much wider decision-making role than before. This often implied balancing a response to 'teacher squeak' (Ysseldyke, 1987; Armstrong, Galloway & Tomlinson, 1991), with parental pressures and the suppliers of scarce educational resources (LEAs in the UK) (Galloway, Armstrong & Tomlinson, 1994). It certainly highlighted the

psychologist's decision-making responsibilities over concerns about the technicalities of psychometric testing (see also Sheppard, 1995). The distinction between a decision-making focus and a psychometric focus continues to be important because particular professionals' concerns have remained varied. For instance, during my professional training course as an educational psychologist in the late 80s in Manchester, the use of IQ testing was played down in favour of intervention-focused curriculum-based and criterion-referenced assessment (see e.g. Ainscow & Tweddle, 1979); and on my placements there was one particular psychologist who outrightly stated he never made use of IQ tests; but most of the other psychologists in the same service were in fact making varied use of a mixture of traditional psychometric approaches and more intervention linked ones (see Farrell, 1995; Corbett & Norwich, 1997).

1.3.1.3. Development of a decision-making model for assessment

Meanwhile, on the research front in the 70s, there was also a gradual development of the application of the decision-making model to testing and assessment of children's SEN. There had already been a strong statement of the new approach in the field of testing for personnel selection. Cronbach and Gleser (1957, 1965) had deplored that measurement theory had focused too exclusively on the parameters within the test, and had not addressed the practical issues of psychological testing in which tests are only an aid to the sequential procedure of decision making. They turned the holy cow of validity in testing upside down: in order to be effective in selecting the best candidates, different information and therefore different tests may be required for different individuals who may have one of the required qualifications and not others:

> Since we cannot speak of the validity of a test that differs for every person, we must speak of the *efficiency of the entire decision-making procedure*. (Cronbach & Gleser, 1965, p.136, my italics).

This approach was taken up within assessment of SEN in the UK most forcefully by Wedell (1970). He suggested a four-stage sequential strategy in

assessment aimed at linking it to intervention and allowing for the possibility of stopping the procedure at any stage:

(1) Screening assessment,

(2) Evaluation of screening assessment,

(3) Hypothesis testing, and

(4) Diagnostic formulation to lead to the following decisions:

- Recommend experimental action (e.g. in classroom), retesting, serial testing;
- Problem not primarily psychoeducational: transfer case as appropriate. (Wedell, 1970, pp.313-314)

Wedell's approach was put together with that of Cronbach and Gleser (1965) as representing a new perspective on assessment, namely the decision-making model, and particularly its 'sequential strategy':

> This model concerns itself with strategies for making decisions. In contrast to the attribute model, which focuses on a static procedure or series of tests, the decision-making model is a problem solving approach. (Swanson & Watson, 1982, p.25)

This did not mean that the importance of reliable and valid testing was put aside, but rather that the highlight was moved from the tool to the goal. The emphasis on the *uses* made of tests was being similarly put in the USA:

> Assessment is always an evaluative, interpretative appraisal of performance. Its goal is simple in one sense, tremendously difficult in another. Briefly, it provides information that can enable teachers and other school personnel to make decisions regarding the children they serve. Yet if the information it offers is misused or misinterpreted, these decisions can adversely affect children and limit their life opportunities. (Salvia & Ysseldyke, 1978, p.4)

The application of the decision-making approach to assessment emphasised the link between assessment and intervention. Thus Wedell (1970) saw the benefits of the approach as resulting in "findings which are both relevant and sufficiently specific to help those concerned in the day-to-day management of the child" (p.21).

This model has also been termed *intervention design*:

> When guided by intervention design, the key tasks for assessment relate to (a) defining problem situations, (b) determining goals and strategies for changing behaviours, and (c) evaluating both environments to support change, and the possible roles of caregivers, family members, and peers.
>
> The nature of assessment for intervention design requires ongoing problem solving, rather than fixed answers to a set of given questions (Schon, 1983). The steps are guided by a consensus on the overall reasonableness of actions that depend on the problem situation. Thus, in contrast to diagnostic or classification decisions, the development of ecologically based helping strategies involves sequential decisions. Target behaviour selection and intervention involves a progressive process where plans are developed, implemented, maintained, evaluated, and modified as necessary. (Barnett, Macmann & Carey, 1992, p.32-3)

In the UK, the idea of a sequential assessment and intervention process was formalised through the four Warnock assessment stages, from identification to Statementing, explained as flow diagrams in the training programme by Evans *et al.* (1989) and reproduced at LEA levels at the end of the 80s (see Bryans, 1993).

The 1994 Code of Practice (see Wedell, 1995) has further formalised the procedure. Assessment is recommended to follow five stages:

1. Class or subject teachers identify or register a child's SEN and, consulting with the school's SEN co-ordinator, take initial action.
2. The school's SEN co-ordinator takes lead responsibility for gathering information and for co-ordinating the child's special educational provision, working with the child's teachers.
3. Teachers and the SEN co-ordinator are supported by specialists from outside the school.
4. The LEA consider the need for a statutory assessment and, if appropriate, make a multidisciplinary assessment.
5. The LEA consider the need for a Statement of SEN and, if appropriate, make a Statement and arrange, monitor and review provision. (Farrell, 1997, p.197)

Most prescriptive literature now stresses the importance of adopting a problem solving and decision-making approach to assessment (see e.g. Witt & Cavell, 1986; Pearson & Lindsay, 1986; Halliwell & Williams, 1991, 1993; Wolfendale, 1993; Dale, 1996; La Greca & Lemanek, 1996). A similar stress is put in

educational psychologists' training programmes (see e.g. Lunt, 1991; 1993; Lunt & Lindsay, 1993; Lunt & Pomeranz, 1993; Cunningham & Oakland, 1998).

1.3.1.4. Empirical research on decision making in assessment of SEN

Main research concerns

Empirical research on the field level decision-making process in SEN has been more widespread in the USA. This research was generally very critical of professional practice. Four main areas were investigated (see review in Ysseldyke, 1987):

(a) *The relationship between referral and eventual classification of students.* For instance, Ysseldyke, Algozzine & Epps (1983) reported that teachers' referrals were the most important factor in determining the eventual classification of students' disabilities.

(b) *The reliability of professional judgements.* For instance, Mcdermott (1977) found a lack of diagnostic consistency among school psychologists.

(c) *The bias in assessment and decision making.* The issue of cultural bias against particular ethnic groups in testing raised great controversies in the USA accompanied with sensational court cases (see e.g. Kirk & Gallagher, 1983).

(d) *The effectiveness of team decision-making practices.* A number of studies of special education team decision making, using recordings of actual team meetings, reported great differences in member participation, inadequate participation of parents and teachers, inadequate use of assessment information, and inefficient group procedures (Ysseldyke, Algozzine & Mitchell, 1982).

Lack of qualitative studies

The above literature did not investigate the qualitative decision-making process in assessment. Only two instances have been traced that made use of verbal protocol analysis to describe at least one part of the sequence in the decision-making process, namely the diagnostic process. Both were based on vignettes presented in the laboratory: Bus & Kruizenga (1989) obtained the think-aloud protocols on the problem solving behaviour of 20 reading specialists when presented with two vignettes of children with reading difficulties; Mesquita (1992) obtained his data from think-aloud protocols of 125 psychologists in a computer simulation task of a diagnostic problem concerning a child with emotional and behavioural difficulties. Though shedding some light on the process, these two studies were limited to the diagnostic process and to an artificial environment that did not include the various other context structures within which psychologists in the field formulated their judgements and decisions.

There were a number of studies of actual multidisciplinary assessment in the real world, but these used quantitative measures that also failed to capture the meaning of the assessment to the participants themselves. Thus, for instance, Goldstein *et al.* (1980) and Ysseldyke *et al.* (1982) evaluated the team process against the standard of prescribed norms of effective team decision-making procedures, such as levels of member participation, occurrence of statements of goals, and consideration of alternative solutions. Similarly, in a verbal protocol analysis of the case conferences in a residential mental health setting, de Bruyn (1990) applied the normative diagnostic sequence measures (Complaint - Problem → Diagnosis → Treatment recommendation) to the multidisciplinary conference protocols.

There are some interesting descriptive accounts of the procedure of the whole decision-making sequence. Ysseldyke *et al.* (1986) described in summary

form the decision-making process from first referral to placement or other decisions about children at four pre-school educational sites in the USA. Recent UK accounts have also been given of the procedures from referral to the application and monitoring of treatment decisions in an interagency service for children with vision impairments (Bradford, 1993; Hirst, 1993; Youngson-Reilly, Tobin & Fielder, 1995), and with ADHD (see Keen *et al.*, 1997), and of procedures in an interdisciplinary assessment service for children with autism (Moore *et al.*, 1998). But these again lack any analysis of the actual assessment protocols of any particular event.

With regards to the impact of assessment procedure on assessment judgements and parent perceptions, an evaluative study reported evidence of the social validity of a transdisciplinary play-based assessment procedure in comparison to a multidisciplinary standardised-test based one (Myers, McBride & Peterson, 1996). However, this was based on outcomes, namely a comparison of evaluations of the child by parents and professionals rather than on the transdisciplinary interaction process.

1.3.1.5. Research on medical clinical reasoning

There has been much more research in the medical field with regards to clinical reasoning. However, it is again restricted to the diagnostic process and is mostly normative and prescriptive (see e.g. Christensen & Elstein, 1990; see journal of *Medical Decision Making, 1980 to date*). Descriptive research is mostly based on case vignettes presented in the laboratory (Elstein *et al.*, 1978; Christensen & Elstein, 1990; Barrows & Feltovich, 1987; Joseph & Patel, 1990; Patel & Arocha, 1995).

However, some research on naturalistic settings is beginning to appear. Leprohon & Patel (1995) studied the "Decision-making strategies for telephone triage in emergency medical services" in Canada. They analysed the

transcripts of 34 nurse-client dialogues on emergency health related calls making use of protocol and discourse analysis. They related their approach to recent studies in other fields which have come together within what has been termed *Naturalistic Decision Making* (Orasanu & Connolly,1993):

> The study of real-world dynamic rapid-decision-making situations is a relatively new area for cognitive science. (Leprohon & Patel, 1995, p.242)

Elstein, as the incoming editor of *Medical Decision Making* in 1995, made a strong call for research that would increase understanding of actual clinical reasoning in field settings:

> Descriptive studies of "everyday" clinical decision making are especially important at this time, because it is clear that for the foreseeable future, we will not have decision trees or statistical rules for most clinical situations. Despite the proliferation of guidelines, clinical decisions will continue to be made by clinicians using their best judgement, and it is crucial to understand their judgement and decision processes better. (Elstein, 1995, p.1)

In addition, since most medical practice involves multiprofessional consultation and collaboration, a call has also been made for more research on collaborative decision making in medicine (Christensen & Larson, 1993).

Thus, research on professionals' decision making has been generally limited to the diagnostic process and has been mostly laboratory based. Moreover, the few studies on field practice have not made sufficient use of the analysis of actual assessment verbal and other protocols used by professionals in order to describe the sequential decision-making process they engage in during the assessment event.

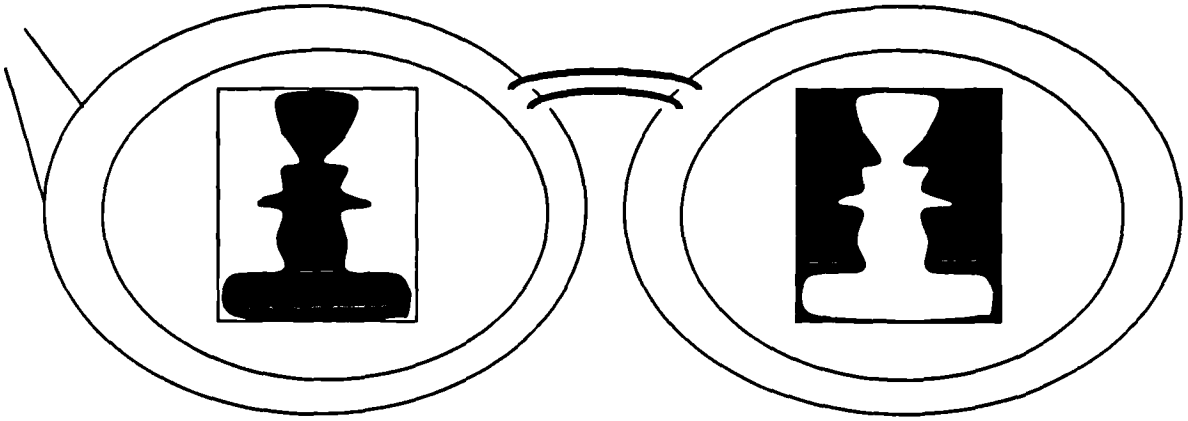
1.3.2. Knowledge and interpretive frameworks in decision making

The above discussion has highlighted the need to understand the *procedural frameworks* used by professionals in organising and processing the information in their search for judgements and decisions about children. There is another intertwined but distinct set of frameworks that influence actual decision making: these are the prior *knowledge* and *interpretive frameworks* within which professionals perceive, understand and reach their decisions. Three types of frameworks are distinguished below.

1.3.2.1. Different knowledge frames lead to different perceptions: the figure/ground effect

Knowledge frameworks may be regarded as glasses with different colouring, with focusing or distorting effects that affect one's view of the environment, in this case of the presenting problem. Figure 1.3.2.1, below, uses a classical example from Gestalt psychology to illustrate the effects of different figure/ground framing of the same visual stimulus. The same shape has been shaded differently so that if one were to focus onto the black area as a foreground within each frame, one sees a candle holder in the left frame, but two facial profiles facing each other in the right frame. When presented with the same configuration of problems, professionals may focus on different features as foreground and similarly see different things, grouped in different ways, when presented by the same child and family.

Figure 1.3.2.1:
Different frames may lead to a change in perspective as the reversing of figure/ground in the same picture can lead to two different mental representations: either two face-silhouettes or a candle-holder



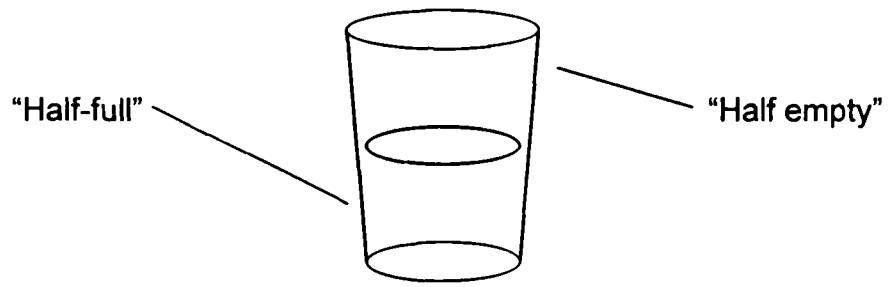
Because of their training, professionals from different disciplines wear different glasses. They tend to focus on the particular aspect that is most relevant to their discipline. Moreover, they have structures of possible scenarios they have acquired through training and experience that lead them to expect that one type of evidence would fit into a cluster of evidence that is associated with a particular class of behaviours (e.g. syndrome) identified within their discipline. This professional knowledge and experience leads them to approach the problem with a particular set of hypotheses on the nature of the problem which in turn leads them to notice particular aspects out of the many features of the presenting problem.

The above framing effects are concerned with the *information* or semantic aspect of problem solving and decision making. They fit within the concept of knowledge structures or schemas developed in cognitive psychology and artificial intelligence (Rumelhart, 1975; Minsky, 1975; Schank & Abelson, 1977).

1.3.2.2. Different goals lead to different interpretations of the same picture

Even when people agree on the same perception of the world, they may still give it different meaning depending on the way they *interpret* the information. Thus, depending on one's optimistic or pessimistic 'frame of mind', the perception of a glass filled with water up to its middle capacity, may be interpreted by one person as being "half-full" of water, and by another as "half empty" (see Figure 1.3.2.2).

Figure 1.3.2.2
The effects of different frames of mind on the *interpretation* of information



In decision making, these frames of mind are related first of all to different assessment *goals*. Thus if the goal of an assessment is to make a claim for the allocation of extra resources for the child, the professional will look for and interpret information within an attempt to establish a match between the presenting problem and types of conditions for which there are legal and administrative arrangements. On the other hand, if the assessment is intended to guide a teacher in developing effective strategies for helping the child to make progress in the curriculum, the professional will focus on those features that indicate the child's strengths and weaknesses, and on the appropriateness or otherwise of strategies, curriculum and other adaptations already being applied in class and at home.

Decision-making goals are also related to higher frameworks of thinking which we term *values*. "Goals and values elicited in a given person in a particular situation govern most of the decision process" (Svenson, 1996, p.261). Values are "principles and beliefs held by individuals, either by themselves or by group membership, which are used as criteria for making judgements on preferred courses of action" (Lindsay & Thompson, 1997, p.2). For instance, the 1994 Code of Practice embraces five "fundamental principles" in the identification and assessment of children's SEN:

- that all pupils with SEN must have their needs addressed;
- that these should be identified as early as possible even before schooling;
- that these pupils are entitled and must be provided access to a broad and balanced curriculum;
- that inclusive education is the most desirable form of educational provision;
- that the knowledge, views and experience of parents are vital to ensuring the education of children with SEN (Lindsay, 1997).

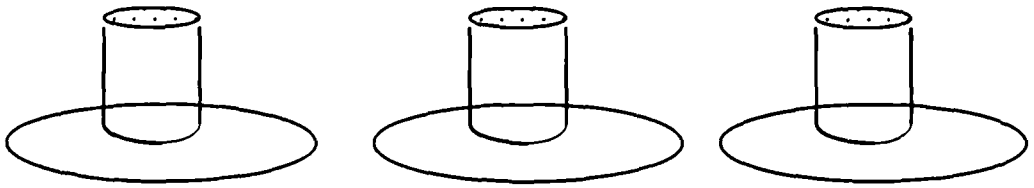
It has been found that "experts use their values more regularly in solving ill-structured problems" (Leithwood, Steinbach & Raun, 1993).

1.3.2.3. Different negotiation stances also lead to different interpretations

Even if the same interpretation is given to a given information, the social context within which the interpretation is made, and the roles of the persons using the information, can again change the formulation and meaning of the problem. In lay terms, one sees the problem differently depending on 'the hat one is wearing' in a particular social interactive situation (see Figure 1.3.2.3, below). There is a kind of social envelope that wraps the information as, for instance, a greeting card, a friendly letter, or an official financial or other statement. This kind of framing is tied to talk in interaction, "What people think they are *doing* when they talk to each other (i.e., are they joking, lecturing, or

arguing? Is this a fight or is it play?" (Tannen, 1993, p.6, author's italics).

Figure 1.3.2.3:
The effects of wearing different hats on the concerns arising from a common interpretation of information on a child's disability



Colleague to fellow professional | Parent supporter | Administrator of resources

Thus, the same interpretation of information on a child as, for instance, having difficulties within the autistic spectrum, may give rise to different interpretive structures in the professional when wearing the hat of colleague to another professional engaged in formulating a diagnosis, or as a supporter of parental feelings vis-à-vis the bad news, or as an administrator of placement resources.

This type of framing has in fact been mostly studied within anthropology, sociology and linguistics (Bateson, 1972; Goffman, 1974, 1981; Bernstein, 1975; Tannen, 1993; see review of framing concepts, terms and their applications in MacLachlan & Reid, 1994).

The *interpretive* frameworks discussed above may be seen as constituting *meta*-messages: they suggest in which mode a message is to be interpreted. They create a context, a recognizable structure, for representing whatever one is talking about. They may also carry status and other power implications. Indeed, some researchers have argued that in multi- inter- or transdisciplinary assessment, the *meta* message becomes the only message. The assessment becomes an arena for social and political negotiation of power and status

which overshadows the concern for understanding the problem more objectively for the benefit of the client (Smith, 1982; Mehan, 1983; Galloway *et al.*, 1994).

It should be noted that all the above three types of frameworks on decision making in assessment of disability are relevant to the transdisciplinary assessment situation: the professionals apply different scientific models and different frames of mind, and wear more than one hat as they interview the parents, or advise them, or assess and address the child, or discuss the evaluation among themselves.

1.3.2.4. Empirical research on knowledge and interpretive frameworks

Suggestions that there are a variety of influence frameworks in decision making about placement have often been made. For instance, Vance *et al.* (1988) found that only 27% of the variance in placement decisions on 95 students was accounted for by test data; they therefore suggested that placement decisions may be related:

> to parental preference for placement, sex, race, teacher personality, administrative guidelines, child's personality, socio-economic status, school environment, reason for referral, or other unknown factors that were not included in this analysis. ... Future research may benefit from addressing these hidden variables. (p.446)

Only one small study has been traced that addressed the general framework issue directly (Holland, 1980). The study was based on structured interviews with teachers, and school administrative and supportive personnel and identified 10 "subtle though nonetheless forceful influences" on the decision-making process in special education. These are reported below, reorganised within the three frameworks described above and accompanied by other relevant research.

Knowledge frames

Holland identified the following factors that may be related to knowledge frames:

- physical/social/emotional maturity of the student;
- academic abilities as well as school behaviour of the student;
- the students male/female identity;
- racial considerations;
- each professional, as well as student and his or her parents, interprets the vast amounts of varied information through previous experiences, biases, beliefs and perspectives. (pp.552-3)

Using qualitative data on 10 children referred for emotional and behavioural difficulties, Boreham *et al.* (1995) found that parents and educational psychologists developed different perceptions, causal attributions and predictions about the children and related this to the prior knowledge on the problem of the professionals and the more fragmented knowledge of the parents. Using questionnaire survey data on Educational Psychologists' and Speech and Language Therapists' assessment of children with specific speech and language difficulties, Dockrell *et al.* (1997) found "marked differences in conceptualisation of the problem, patterns of assessment, the importance of discrepancy analysis and the Educational Psychologist's role." Through postal opinions on case vignettes, Waxman, Rapagna & Dumont (1991) found effects of theoretical orientation, level of experience and relevant assessment strategies on the attribution of dispositional and contextual causes of client problems by counsellors. On the basis of a questionnaire survey among school psychologists, speech therapists and physicians using two vignettes, Cuccaro *et al.* (1996) found that professionals tended to diagnose autistic disorders more frequently in a child with higher socio-economic status, and that speech therapists tended to rank language disorder as more likely than other disorders in comparison to the other professionals.

Assessment goals

Holland (1980) identified the following factors relevant to assessment goals:

- available programs/resources;
- geographical proximity of certain special educational services. (pp.552-3)

In a major ethnographic study of 53 Education and Placement Team meetings in the USA in 1978-79, Mehan (1981;1983;1991) reported a strong influence of "economic, practical and legal constraints" on decisions actually taken at these meetings.

Negotiation context

With regards to the influence of the negotiation context, Holland (1980) identified:

- parental pressures;
- vested interests of social agencies/advocacy groups;
- the teacher's and/or principal's influence;
- effective communication, good interpersonal skills, and/or degree of authority of the individuals involved will necessarily influence the final outcome of the decision-making process. (pp.552-3)

Two discourse analytic studies of qualitative field data in the UK have shown the strong impact of social and political influences. On the basis of data on the assessment of 29 children with emotional and behavioural difficulties, Galloway *et al.* (1994; cf. Armstrong, 1995) showed how students' needs were *constructed* by professionals depending on "the perspectives from which different professionals operate when carrying out their assessment" (p.135). In a study of the protocol of an interagency educational case conference on an adolescent with emotional and behavioural difficulties, Marks (1992; 1993) described how the decision-making process was dominated by professional conflicts which overrode the perspectives of the adolescent and his mother.

Evidence of limited parental roles in the decision-making process as a whole

has also been reported (Stratham, 1988). Positive developments and limitations in parental roles at nine Individualised Family Service Planning conferences were also studied through grounded theory in the USA (Minke & Scott, 1993).

The above studies again show an important lacuna. Holland's (1980) study merely listed the different influencing factors, while the other studies were limited to particular forms of influence, and often also did not attempt to describe how influences were applied in the actual sequential decision-making process of any particular assessment event.

1.3.2.5. Studies on doctor-patient interaction

It is within medical doctor-patient interaction that the verbal protocol interaction in assessment has been investigated. These interactions in medical settings have been most widely investigated with a focus on the asymmetrical interaction in terms of power, expertise and distribution of interactional space (e.g. Maynard, 1991; Parrott, Greene & Parker, 1992; Beck & Ragan, 1992; cf. Gutkin, 1996; Linell & Luckman, 1991).

Some studies have reported different reference worlds used by professionals and patients (Mishler, 1984), while more recently there have been reports on how professionals and patients sometimes adopt each other's reference worlds (Aronsson *et al.*, 1995).

Another relevant research focus has been on the process of particular strategies in the disclosure of the diagnosis of disability (Cottrell & Summers, 1989). Conversation analysis of the delivery of diagnosis to parents in a clinic specialising in developmental disabilities showed that professionals were very cautious in their delivery of bad news, and that they sought the active participation of the parents in a joint formulation of the diagnosis (Gill & Maynard, 1995). Similarly, Abrams & Goodman (1998) found that the

professionals were very reluctant to use the term 'mental retardation', and hesitated between optimistic and pessimistic views of the diagnostic formulation which was in fact jointly constructed by the professionals and parents.

1.4. The need for naturalistic field study

The outstanding fact in the brief picture given above of empirical work on assessment and decision making in the field of disability is the paucity of naturalistic studies of professional practice, especially with regards to multi-, inter- or transdisciplinary work. There is a need for research that seeks to understand what professionals try to do, and how they try to do it within real work settings (Barrows & Feltovich, 1987; Elstein, 1995), including the actual social interaction context (Gill & Maynard, 1995). For instance, while laboratory research has shown how school psychologists are biased, or inconsistent, or make inconsistent use of test results in their placement decisions, we need naturalistic research to throw some light on what it is that these psychologists are trying to achieve, and what goes into their situation assessment as they make actual decisions about children; and this, not only in separate, static accounts as in Boreham *et al.*'s (1995) description of psychologists' and parents' situation assessment, but also as a sequential interactive, joint construction.

1.4.1. Assessment of disability as an ill-structured problem

The case for naturalistic investigation of professional practice rests especially on the fact that in assessment of disability professionals are faced with an *ill-structured problem* (Reitman, 1965; Voss *et al.*, 1983; Voss, 1988; Barrows &

Feltovich, 1987). In ill-structured problems,

- all the information needed for the solution is not available at the outset;
- the nature of the problem changes as investigation proceeds;
- the approaches that lead to the solution are generally not standardised but are unique to the problem; and
- the problem-solver may never be certain that a solution has been reached. (Barrows & Feltovich, 1987, p.90)
- In addition, ill-structured problems typically do not have solutions which have consensual agreement among experts in the field. (Voss, 1988, p.75)

This inherent variability of ill-structured problem situations is better captured through research in field settings which can thus reflect the influence of context on the variation of judgements and decisions.

1.4.2. Naturalistic Decision-Making research

The recognition of the characteristics of ill-structured problems has recently led to the development of a new paradigm in decision-making research since classical decision laboratory studies "could not account for the manner in which experts made decisions in actual, dynamic environments" (Cannon-Bowers, Salas & Pruitt, 1996, p.203). The term *Naturalistic Decision Making* (NDM) was coined in 1989, when a conference was organised for "researchers who had stepped outside of the traditional decision research paradigms," and its proceedings were published four years later (Klein, Orasanu, Calderwood, & Zsambok, 1993). A second conference on NDM was held in 1994 and its proceedings published in Zsambok (1997). The new focus was on:

> how experienced people actually make decisions in their natural environments or in simulations that preserve key aspects of their environments. ... *NDM is the way people use their experience to make decisions in field settings.* (Zsambok, 1997, p.4, author's italics)

Nine key characteristics of tasks, decision makers and environments in naturalistic decision making were identified (Orasanu & Connolly, 1993; Cannon-Bowers, Salas & Pruitt, 1996; Zsambok, 1997). The first one has

been noted above, namely that the problem is ill-structured. The other eight factors are:

- *uncertain dynamic task* due to incomplete, ambiguous and changing, temporally unfolding information;
- *action/feedback loops are a common feature*, with the consequences of actions taken by the decision maker becoming part of the decision problem itself;
- *shifting, ill-defined or competing goals* rather than a single specific goal given in a laboratory setting;
- *organisational goals and norms influence the process,* the decision maker's personal goals being congruent or otherwise with those norms;
- *large quantity of information to be considered*, requiring the decision maker to access relevant knowledge and procedures in order to learn and harness the information to support the decision; decision makers are characterised by some level of expertise in the area (identified only by Cannon-Bowers, Salas & Pruitt, 1996);
- *multiple players are involved,* and team decision making is often though not necessarily entailed (Cannon-Bowers, Salas & Pruitt, 1996);
- *time constraints are an important factor* in the determination of the decision maker's approach;
- *the decision carries meaningful consequences* for the decision maker and/or the problem situation, in contrast to laboratory tasks.

1.4.3. Need to study the intertwined factors operating in the field setting

Within NDM research there has also been an attempt to adopt a *holistic* approach in the study of the above multiple task, decision-maker and environment conditions. Barrows and Feltovich (1987) again had put the argument strongly:

> Much can be learned from investigations that look into pieces of the [clinical reasoning] process. However, it seems important that the relationship they have to the overall process be understood so the process as a whole can be better defined or revised. ... The nature of the process in consultation, case review and continuing patient care as well as variations due to setting - the emergency room, hospital room, primary care clinic and the like - need to be studied. Details concerning the cognitive processes used within the Clinical Reasoning Process and

their relationship to knowledge structures need to be elaborated. (p.90)

Beach *et al.* (1997), in their review of the field of Naturalistic Decision Making, make similar but wider observations on the need to capture the complexity of the interrelationships in the field setting that reductionist studies try to avoid:

> There are strong interactions among information processing activities that have traditionally been studied in isolation by experimental psychologists; diagnosis and action are as intertwined as perception and decision making. Thoroughly understanding behaviour in naturalistic contexts requires understanding of perception, decision making, action, problem solving, attention, planning, metacognition, and team/social processes. None plays a privileged role because all are intertwined. (Beach *et al.*, 1997, p.31)

An experimental design would offer much neater control over the variables affecting the problem solvers' behaviour. For instance, a single or controlled multiple forms of a case vignette presented to a specified sample of professionals would give unconfounded results (see e.g. Dhami, 1999). However, such research also has its limitations: important relevant aspects of the actual whole problem situation in the field may be left out; the importance of various components of the process may be underestimated; moreover, some aspects of problem solving may emerge only when more complex situations are examined directly (Woods, 1993).

Naturalistic design, though not necessarily limited to field settings (Cannon-Bowers, Salas & Pruitt, 1996), attempts to capture the complexity of field settings, even at the expense of a trade-off with some confoundedness. It is regarded as worthwhile research because:

> First, such studies offer insights that cannot easily be acquired with reductionist research.
> Second, such studies are comparatively rare ...
> Third, from the applied viewpoint, such studies are essential for sound research design ...
> Fourth, from a basic viewpoint, such studies provide hope for results that generalise beyond the laboratory. (Beach *et al.*, 1997, p.32)

1.4.4. Need for NDM research of assessment of disability

No research on assessment of disability was reported at the two conferences on NDM research mentioned above. Yet, all the factors characteristic of NDM mentioned above are relevant to decision making in assessment of disability. There is a need for research on how professionals in actual field settings combine learned procedural structures with available problem information and with their own prior knowledge. These also need to be understood in relation to contextual constraints of the social situation arising from the institutional setting, their colleagues' behaviour, the child's and parents' behaviour. Such analysis is particularly lacking with regard to transdisciplinary assessment situations.

This study is intended to address this lacuna. This is expected to provide new insights on professionals' real world decision making in assessment of disability. Such insights are expected to be more relevant to existing professionals' efforts to improve their practice, as well as to address the learning needs of new trainees. The results should also provide research tools for action-research and evaluation projects in field settings, as well as for more field-related laboratory research (see Woods, 1993).

1.5. A study of the decision-making *process* not *outcome*

Because of its focus on ill-structured problems which have no correct solutions, NDM research has been concerned mostly with an attempt to describe the decision-making *process*: to "*describe* what people do"; "trying to understand *how* people make decisions, solve problems and assess situations" (Klein, 1997b, p.387).

This approach is sometimes criticised as not useful. A well-known decision researcher was reported as having had "difficulty comprehending that anyone would seriously try to study how people actually made decisions, in the absence of any normative standard" (Klein, 1997b, p.386).

1.5.1. Concerns about outcomes

From an evaluative - administrative or political point of view, one might be more interested in outcomes. This applies especially to multidisciplinary work which is seen as more costly. For instance, Tizard (1973) had delivered a scathing attack on the Child Guidance Clinic team:

> It is an expensive, ineffective and wrongly conceived institution. It is expensive in that the members of 'the team' of psychiatrist, psychologist and social worker see very few children. It is ineffective in treatment - and grossly insensitive to the needs of the community it is meant to serve. It is wrongly conceived in that its clinical orientation causes it to pay only minor regard to the problems of the school, with which the educating system is concerned, and the ones perhaps most open to change. (p.114)

And his view of the team as a potentially overexpensive method prevails:

> There are many ways of organising the services which are needed in the community without multidisciplinary teams - *an expensive and unnecessary way to organise in some situations.* (Ovretveit, 1993, p.9: my italics)

There is indeed a concern to develop some form of measurement for team decision-making effectiveness in the field of special education through a focus on outcomes. Thus, Gutkin & Nemeth (1997) reject the attempts at evaluation through the measurement of quality of the group process in terms, for instance, of the extent to which relevant information was used or the level and spread of participation of team members (see e.g. Ysseldyke *et al.*, 1982). They see this as a partial solution that cannot replace "objective outcome data per se". They

call for outcome research to "build a science of team-based, school psychological services".

There has in fact been one recent outcome-evaluation of multidisciplinary developmental assessment: a six-month follow-up study of the perceptions of, and use made by, 40 mothers of the recommendations of the multidisciplinary team about their child (Glaun, Cole, & Reddihough, 1998). However, the concluding recommendations of this research were ultimately concerned with changing the process:

> A collaborative approach throughout the assessment process is necessary in order to create an atmosphere in which parents can openly and honestly discuss their concerns about the findings and recommendations as well as their perceptions and needs. (p.471)

In order to change the assessment process effectively, one needs first to understand it. Moreover, Gutkin and Nemeth (1997) had also recognised the difficulty of using outcome measures in this area of ill-structured problems:

> Since the optimal solutions to presenting problems are frequently unknown, it is difficult to assess the quality of decisions arrived at by groups. (p.198)

1.5.2. Value of process studies

Not only is an understanding of the assessment process required to change it effectively if necessary, but there are also indications that the assessment process might deserve attention because of its intrinsic value as a process for families of children with disability. For instance, Hall (1997) suggested that the main value of the work of Child Development Teams might not be in better intervention outcomes for the child but rather in their providing support for the parents:

> Even if (as seems likely) the benefits of most interventions are shown to be modest, in terms of functional or neurological change, parents will

> still expect someone to tell them how to handle, manage and educate their disabled child and they will want to know what benefits exercises, stretching, equipment or surgery might have. Research studies will need to address the potential benefits of providing information and expertise, in building confidence and facilitating adaptation to the problems of disability, in addition to the more obvious aims and outcomes of intervention. (p.95)

Another intrinsic value of the process itself lies in the concern about ethical issues in the negotiation process between professionals and clients. Such issues have been important with regards to the need for child advocacy in the assessment of child abuse vis-à-vis parents or guardians, and more recently vis-à-vis the school (McMahon & Pruett, 1998). The importance of a close study of the professional-client negotiation process has also been raised in relation to the need for ensuring informed consent of the client in health settings. It has been observed that informed consent can only be measured if the process of client comprehension of information is understood:

> Consent is the agreement of patients or subjects to allow professionals to treat them therapeutically or as research subjects. Legal and ethical discussions emphasise that consent is valid only if the patient is informed ... The basic concerns which constitute the issue of informed consent can be summarised in terms of voluntariness, comprehension, sufficient information, and consent. ... Most discussions in the current medical ethics literature focus on standards of disclosure in an attempt to determine criteria for "sufficient information" ... These discussions consider content and method of disclosure since disclosure without comprehension does not fulfil the ethical requirement of informed consent .... Little progress has been made in establishing criteria for verifying comprehension. (Burgess, 1986, p.52)

Detailed study of professional-client interaction was necessary to develop tools for assessing levels of patient comprehension and thus for establishing more appropriate ethical criteria for informed consent:

> If empirically verifiable criteria of comprehension could be found, they could serve as a practical measure of the fulfilment of the ethical requirement. Sociolinguistic studies of practitioner-patient interviews help by describing and analysing the exchange of information and the contributions which each participant makes to the interview and its outcome. ..... Ethicists can utilise such analyses as an index to how

> active a role patients take or physicians allow the patient, how much understanding is displayed, and the like. This could result in recommendations whose effectiveness could be checked by further study, which would also suggest ways of revising them. (*Ibid.*)

This study is aimed at capturing the meaning of the process to both professionals and clients and thus should be able to also address this lacuna in research on team assessment processes.

1.6. Conclusion and preview of chapters

1.6.1. Summary

The purpose of the present study is to identify and describe the frameworks used by multiprofessional groups in arriving at judgements and decisions about children with developmental disability. It is concerned with the decision-making process rather than outcomes.

The study focuses on two categories of frameworks that might influence decision making: the *sequential procedural* structure of the assessment, and the *knowledge*, *goal* and *negotiation* frameworks within which the presenting problem is understood and decisions formulated.

There is a need for research on how these frameworks operate concurrently within naturalistic settings in assessment of disability. Such assessment is currently characterised as a problem-solving and decision-making task. Moreover it has all the task, decision-maker and environment characteristics typical of NDM: assessment is an ill-structured task, is undertaken by experienced professionals working in dynamic environments, where the stakes for the participants are highly valued, and there are a multiplicity of competing individual and organisational goals. The results of this study are expected to

have important implications for practitioners and training programmes, as well as for further experimental research.

1.6.2. Preview of other chapters

The following is a preview of the next ten chapters.

Chapter 2 sets out the theoretical framework of the study. Four types of naturalistic decision-making frameworks are described: (1) the first focuses on the *procedural* structuring of the assessment; (2) the other three focus on the knowledge and interpretive structures that guide professionals' reasoning: (a) *knowledge* structures, *(b)* Assessment *goal* structures, and (c) *negotiation* context structures. Each type of framework is described first at the theoretical level (1 and 2a mainly from cognitive psychology, 2c from sociology; and 2b from both these disciplines), and then as applied in the literature on group decision making in assessment of children with disability.

Chapter 3 describes the research aims, focus, and questions. Three main *how* questions are raised: How do *procedural* frameworks structure the way professionals actually organise and process their assessment of pre-school children with disability? How are disciplinary *knowledge* and professional and institutional *goal* structures activated in the professionals' decision-making process, and with what consequences? How are professionals' formulations of the problem and of possible remedial action *negotiated* and with what consequences?

Chapters 4 and 5 give an account of the methodology.

- **Chapter 4** presents the qualitative, multiple-case study design and its rationale for answering the research questions and generalizability to theory. An account is given of the choice of two cases from each of two sites (one

medical and one educational) and how access was managed. Naturalistic discussion protocols were recorded as the main database, and these were triangulated through semi-structured post-assessment interviews held with each participant.

- This is followed by an account in **Chapter 5** of how two types of analysis were applied to the data. First, all discussion protocols were subjected to *verbal protocol analysis*: a coding frame was developed that included six *task* decision-making processes and three *group* negotiation processes. These were applied at three levels of analysis: single-statement, SUBgoal and MAIN goal levels of each protocol. This led to the derivation of the procedural structures, and the knowledge and goal structures of each assessment. The protocols were also subjected to *discourse and conversation analysis*. This analysis, in addition to the group process codes, led to the derivation of the negotiation structures within each assessment.

Chapters 6 - 9 give the results of the study.

- **Chapter 6** gives a description of the *referral problems and decision makers* in each of the four cases in the study. An account is first given of the local health or education services' and parents' referral concerns in each case. The institutional and disciplinary contexts of the professional groups at the two Sites are then described.

  This is followed by a description in the next three chapters (7-9) of the procedural, knowledge, goal and negotiation frameworks applied by the professionals in the decision-making process in each case and Site.

- **Chapter 7** describes the *sequential decision-making process.* It shows how the professionals at both sites engaged in each of the six *task* processes identified in the coding frame. At each site also, these processes were applied repeatedly in three sequential Cycles of problem solving and

decision making within each assessment. The professionals also linked their action to other pre- and post-assessment services received by the child and family.

- **Chapter 8** focuses on one particular process, namely the *Explanation* process, and on the *knowledge* and *goal* structures of the assessments. It shows how diagnosis was central to decision making at both Sites, and also how the professionals' explanations were developed through the activation of three scientific *knowledge* structures, and other concurrent *goal* structures (client, resource, and legal accountability schemas), and *negotiation* structures.

- **Chapter 9** gives an account of group dynamic *negotiation* structures that framed the assessment process. An account is first given of inter-professional negotiation frames that impacted the decision-making process. This is followed by a description of how professional-parent negotiation frameworks influenced the formulation of the problem and its solutions.

Chapter 10 discusses the implications of the results within group decision making in assessment of children with early childhood disability, as well as within naturalistic decision-making research in general. The limitations and potential use of the results for further experimental research as well as for the improvement of field practice and professional training is also discussed.

Finally, **chapter 11** brings together the main conclusions and implications of the study.

Chapter 2

THEORETICAL BACKGROUND: FOUR DECISION-MAKING FRAMEWORKS IN MULTIPROFESSIONAL ASSESSMENT OF DISABILITY

2.1. Introduction

This chapter sets out the theoretical framework of the study. Four types of naturalistic decision-making frameworks are described: (1) the first concerns the *procedural* structuring of the assessment; (2) the other three focus on the knowledge and interpretive structures that guide professionals' reasoning: (a) *knowledge* structures, (b) Assessment *goal* structures, and (c) *negotiation* context structures.

Each type of framework is described first at the theoretical level (1 and 2a mainly from cognitive psychology, 2c from sociology; and 2b from both these disciplines), and then as applied in the literature on group decision making in assessment of children with disability.

2.2. Decision-making frameworks: a definition

2.2.1. Structures of procedures, knowledge and interpretive contexts

When professionals, individually or as a group, are asked to assess a child and family, their task is not a new endeavour. Their activity is guided by their usual ways of organising the assessment, their relevant knowledge about children

and families, and about types of developmental difficulties and ways of addressing them, and by their training and experience in carrying out assessments. Because they have developed structures of thinking and acting in such situations, much of their thinking and activity may be almost routine and automatic. They are thus able to direct their attention to particular features of the presenting problem, interpret what they see and hear according to the purposes of the assessment, and carry out the relevant tasks relatively quickly and smoothly.

The professionals' interaction with each other, and with the child and family, is also carried out within their knowledge and experience of such a situation, in the given institution. They can get along smoothly because they generally know what to expect of each other in such a situation.

Thus, it is assumed that professionals make use of structured approaches to assessment which strongly influence their selection of evidence, and their judgements and decisions. This study aims at capturing the activation of such structures of professionals' prior knowledge and experience, and of institutional and interactional contexts.

A variety of terms have been used to characterise the influence of these decision-making structures, some of which have appeared in book titles: *orientations* (e.g. Wedell, 1975), *approaches* (e.g. Allen, Holm, & Schiefelbusch, 1978), or *perspectives* on disability (e.g. Cline, 1992); *models* (e.g. Sandow, 1994; Tyrer & Steinberg, 1998), *conceptualisations* or *constructions* of disability (e.g. Clough & Barton, 1995); *values* in special education (Lindsay & Thompson, 1997); *frames of reference* in assessment (e.g. Lyon, 1994), *framing* in discourse (e.g. Tannen, 1993), or *frameworks* for negotiation (e.g. Cunningham & Davis, 1985).

This study will use the term *frameworks* as the most widely applicable and applied term: BIDS database for 1995-98 listed 1109 articles with 'framework' in the title, but only 175 with 'framing' and 28 with 'frames of reference'.

Two other terms may be used interchangeably: *structures* and *schemas* (or schemata). Structure is a synonym to framework. Schema has been the most widely used term in cognitive psychology to refer to a configuration of knowledge about objects and events (see e.g. Haberlandt, 1997 - also called "frames" (Minsky, 1975), and "scripts" (Schank & Abelson, 1977 - see #2.3.1 and #2.4.1, below). This configuration includes generic information, not the unique features of a specific situation or event. Schemas have four basic features (see Rumelhart & Ortony, 1977):

- *A schema has variables*: e.g. a typical hospital has wards, operating theatres, administration section; but the particular features of each of these vary for different hospitals.
- *A schema can include other schemas*: e.g. the schema for a visit to the hospital includes schemas about typical doctors, nurses, wards, medical examinations and treatment regimes.
- *Schemas vary in their abstractness*: e.g. the event of going to hospital includes many routines: at the most abstract level, a routine refers to a repeated operation in whatever situation; at a less abstract level, one would specify the function of the routine, such as getting on and off the hospital bed.
- *Schemas are flexible* (but see Newel, 1989): e.g. the typical visit to the hospital might include being examined by a doctor, being prescribed medication and being nursed; but there are hospital visits where no medication is prescribed.

It is not within the scope of this research to develop a refined theory of schemas. It is rather making use of the term schema in its generic meaning as above in an attempt to identify and describe the activation of particular structures of knowledge and action in assessment of disability. An exhaustive description of these structures and how they are acquired and represented in people's minds or social cultures would be useful, but will require further

research. This study is taking a holistic view of decision making in assessment, and is thus intended to identify possible structures and their *functions* in assessment. It will seek evidence for positing the existence and impact of generic frameworks which enable the professional (as decision maker) to:

- recognise easily additional experiences that are also similar, discriminating between these and ones that are dissimilar;
- access a generic framework that contains the essential elements of these similar experiences, including verbal and nonverbal components;
- draw inferences, make estimates, create goals, and develop plans using the framework; and
- utilise skills, procedures, or rules as needed when faced with a problem for which this particular framework is relevant. (Marshall, 1995, p.39)

The concept of schema that is being used in this study is thus more flexible than that originally operationalised in artificial intelligence: rather than a fixed knowledge structure, it is to be seen as an orientation or interpretive framework that enables the activation of patterns of thinking within it and inhibits the activation of alternative patterns. Thus, for instance, in the field of assessment, one can talk of a schema for differential diagnosis versus a schema for assessing the child's strengths and needs for educational support: both schemas will have slots for child's levels and patterns of performance on developmental tasks, but the schema determines which data is highlighted, how it is integrated and how it is used in reaching decisions. This study aims at identifying the operation of such a multiplicity of schemas and subschemas in a complex real field setting and describing some of their consequences for decision making. It will then be the task of further research to develop more exhaustive accounts of the constituents, construction, and use of each schema.

2.2.2. Frameworks *in action*

The above approach applies to this study especially because it focuses on frameworks *in action,* and in the complexity of an actual field context. It is not aimed at investigating the frameworks themselves as abstract phenomena, but rather as applied phenomena that influence the way professionals proceed towards judgements and decisions about children with disability and their families. Thus, one of the important aspects of this phenomenon is how professionals combine the activation of more than one schema, either concurrently or in close alternation, in moving towards their decisions and actions in the assessment (see e.g. Tannen & Wallat, 1987).

2.2.3. Four types of frameworks

Four main types of inter-linked structures are seen as framing professionals' decision making in this study (see Figure 2.2.3). The four frameworks are divided into two categories: (1) the *procedural* framework, including processes and their sequential application; and (2) the closely inter-linked knowledge and interpretive frameworks, i.e. (a) *knowledge* structures, (b) *goal* structures, and (c) *negotiation* structures:

1. It is assumed first of all that there is a *PROCEDURAL* structure that determines how information is processed. The questions that address this structure are: How is the assessment organised? Are there any general procedures applied to the information being presented across assessments?

2. The other three structures frame the way the information is picked up, integrated and used. Three inter-linked structures are distinguished:

(a) It is assumed that the professionals have organised structures of *KNOWLEDGE* about the presenting problem, based on training and

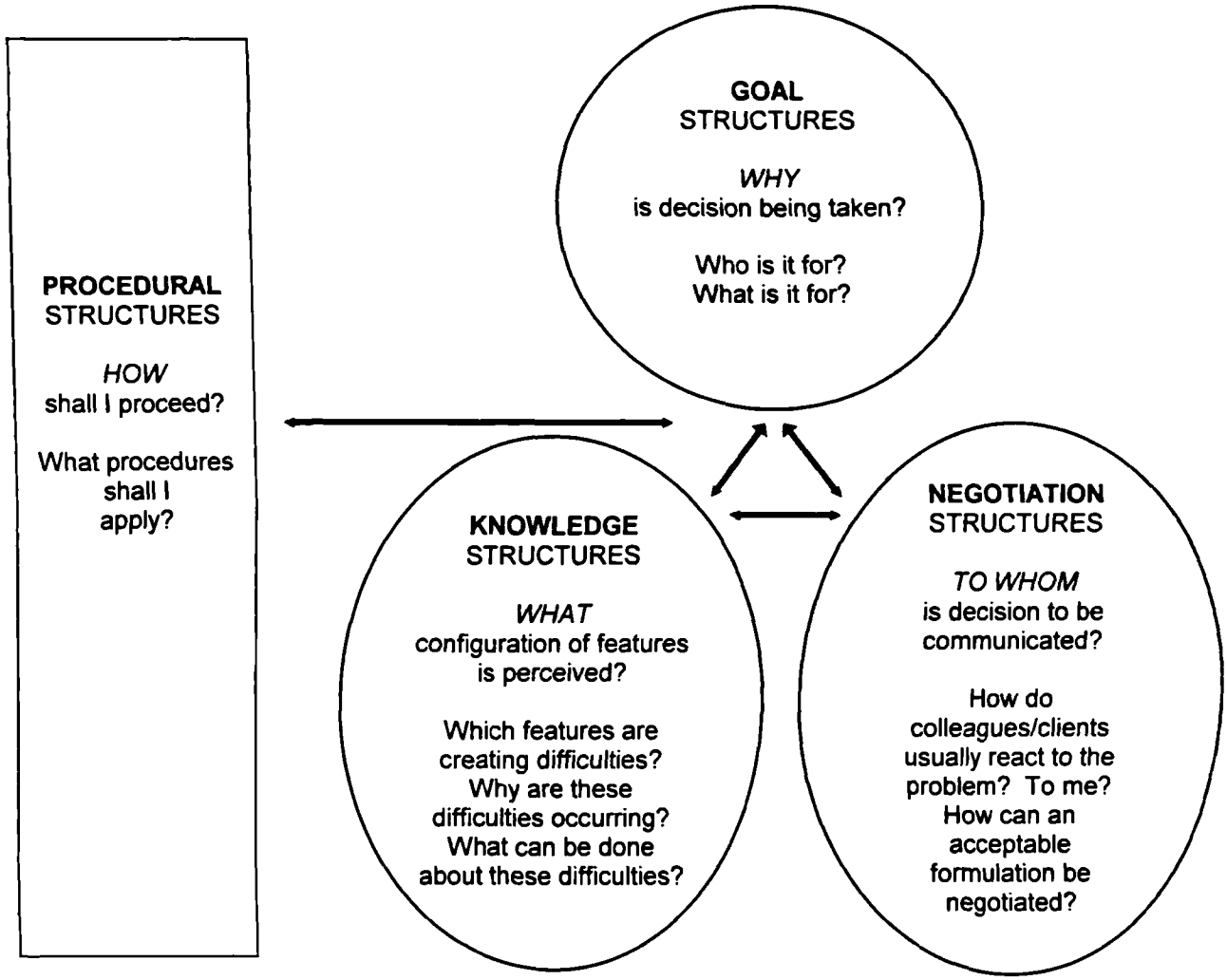
experience. These influence what features are perceived and how they are integrated together. The questions addressing these structures are: What features are perceived as constituting a problem? What causal explanations are developed for the perceived problem? What kind of solutions are suggested?

(b) It is assumed that the relevant knowledge structures of the professionals are extensive and flexibly organised. Particular features are activated in each case, depending on the *GOAL* structure, and thus the focus, of that assessment. The questions that address these structures are: Why do the professionals think they are carrying out this assessment? For whose benefit (client) is it? What is it intended to achieve?

(c) Given the social interaction context of the assessment, it is assumed that the professionals' focus will also be influenced by structures of the *NEGOTIATION* context. The questions that address these structures are: To whom are the judgements and decisions about this problem to be communicated? How do colleagues, from particular disciplines and in particular settings, and clients with particular backgrounds and situations, usually understand and react to the formulation of these problems? How are problem formulations influenced by the inter-professional and professional-client negotiation contexts?

Procedural and knowledge structures (1 and 2a) have been mostly studied within cognitive psychology. Interpretive and negotiation structures (2b and 2c) have been most widely studied within sociology.

Figure 2.2.3: Four types of decision-making frameworks



2.3. PROCEDURAL frameworks: Scripts and cognitive processes

The search for structures that guide people's behaviour in familiar events, including those of problem solving, has been an important aspect of cognitive psychology. Two concepts are relevant to the current study.

- One is the notion that people approach an event through a *script*, an

abstracted structure of the normal sequence of events that occur in that type of event (Schank & Abelson, 1977).

- The other is the notion of *cognitive processes,* or procedures for acquiring, organising, and using information in solving a problem (Ericcson & Simon, 1993).

2.3.1. The search for an assessment *script*

2.3.1.1. Event scripts

The term *script* is applied to abstract structures of knowledge of events that are assumed to be the organising frameworks of one's memory that guide one's understanding and interaction with the environment. It is assumed that such structures guide human behaviour through expectations of *how,* for instance, a story usually unfolds, or *how* one usually proceeds to have a meal at a restaurant, or *how* one usually proceeds through an assessment:

> Understanding is a process by which people match what they see and hear to pre-stored groupings of actions that they have already experienced. (Schank and Abelson, 1977, p.67)
>
> A script is a structure that describes appropriate sequences of events in a particular context. ... Scripts handle stylised everyday situations. (*ibid.*, p.41)

Though Schank and Abelson had suggested that a person "uses scripts almost without thinking" (p.68), the term refers to conscious knowledge structures in contrast to *procedural* knowledge, the latter being automatic and implicit and associated with motor actions, as in walking or driving a car.

2.3.1.2. An assessment script

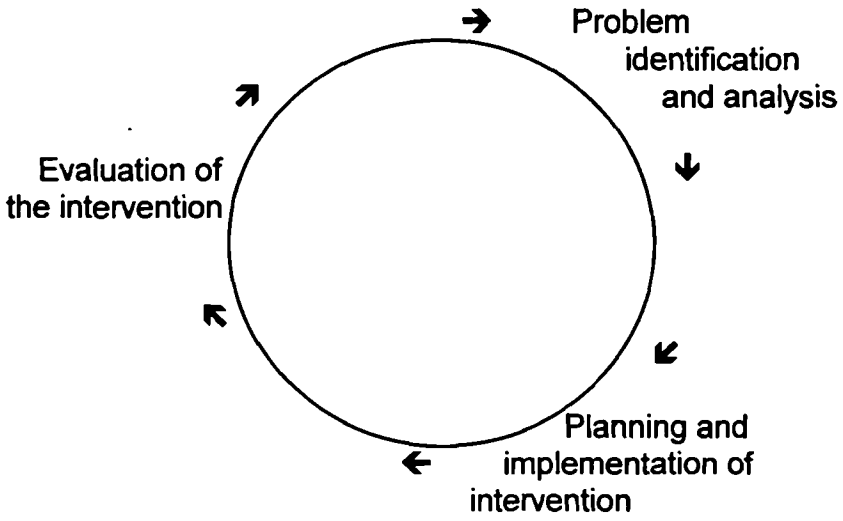
Given that assessment is a "stylised every day situation" for professionals, one can assume that there is an assessment script as much as there is a restaurant script. An assessment script would include a sequential structure for the main actions undertaken during an assessment. No study has yet attempted to empirically derive an assessment script. However, as mentioned in Chapter 1, a number of *prescriptive* scripts have been suggested.

2.3.1.3. A prescriptive script for assessment over time

Developmental assessment is regarded as consisting of a chain of events rather than a one-off episode (Wolfendale, 1993; Wetherby, Schuler & Prizant, 1997). Thus prescriptive texts generally focus on the *larger script* of the whole sequence of a child's involvement with support services, from referral to assessment, to intervention and evaluation (see Figure 1.3.1.1a, above). The main actions in such a larger assessment script are seen to include at least three major steps (see e.g. Witt and Cavell, 1986; Pearson and Lindsay,1986; Ysseldyke *et al.*, 1986; Evans *et al.*, 1989; Gerard & Carson, 1990; Ovretveit, 1993; Halliwell and Williams, 1993; Dale, 1996; Evans *et al.*, 1997; Herbert, 1998 -see Figure 1.3.1.1a, above, and Figure 2.3.1.3 and Table 2.3.1.4, below), namely:

1. Problem identification and analysis;
2. Planning and implementation of intervention;
3. Evaluation of the intervention.

Figure 2.3.1.3:
A prescriptive decision-making script for long term assessment



2.3.1.4. A prescriptive script for one team-assessment event

With regards to *particular assessment events*, it is more difficult to find a common script. This is because in the first place there are a great variety of individual and team assessment events (see Table 2.3.1.4, below). For instance, in the first three stages of the identification of special educational needs (1994 Code of Practice), the meetings between the teacher, SENCO and parents, and other professionals, are intended to provide the teacher with strategies for enabling the child to progress. But "the procedures of Stages 4 and 5 are quite different, since they serve to meet the LEA's duty to be accountable in allocating limited resources" (Wedell, 1995, p.44; see Table 2.3.1.4, below, for meetings at different stages of the decision-making process about a client).

Table 2.3.1.4:
Examples of prescriptive long-term assessment scripts

Ten stages in the care management process (Ovretveit, 1993, p.78)	**Seven successive discussion stages in Statementing process** (Evans *et al.*, 1989)	**Eleven steps in the 'Negotiated problem solving' process**: (Dale, 1996, p.90)
Stage Process 1. Referral sources (how referrals reach the team) 2. Reception (who receives the referral and with what responses?) 3. Acceptance for assessment (who decides and on what basis?) 4. Allocation for assessment (to whom and at what level?) 5. Assessment (profession-specific or team assessment?) 6. Acceptance for longer-term work (Will team continue to work with client or move to closure?) 7. Allocation for longer-term care (Who will work with client?) 8. Intervention and/or monitoring (Individually or by team) 9. Review (Individually or by team) 10. Closure (Individually or by team)	1. Is child making expected progress? | No V *Discussion between parents and professionals.* Modify learning opportunity. 2. Is child making expected progress? | No V *Discussion between parents and professionals.* Seek advice/help from support services. | V *3. Discussion between parents and professionals.* Modify learning opportunity. | V 4. Is child making expected progress? Might LEA need to determine provision? | V *Discussion between parents and professionals.* Refer child to LEA with prima facie grounds to initiate assessment. 5. Write to parents ... Invite information. Request educational, medical and psychological advice ..... | V *Receive and evaluate advice, representations and evidence* [presumably by some type of team]. ..... | V 6. Issue draft statement. *Discuss with parents. .....* *7. Offer parents meetings with LEA officers and professional advisers.*	1. identifying the issue of mutual concern or interest, 2. clarifying and defining the problem or decision to be resolved, 3. brainstorming, 4. generating alternative options to solve the problem... 5. listening to and acknowledging the parent's perspective, ... 6. communicating the professional's perspective, ... 7. evaluating the options in relationship to the shared problem or goal, ... 8. making the decision jointly. ... 9. developing plans for action together. 10. taking action ... 11. jointly evaluating the adequacy of the decision in light of the feedback.

Moreover one team assessment event may be split into mini events, each of which may have different specific goals, and include or not include the parents (see e.g. Ysseldyke *et al.*, 1986).

This study is focused on two particular types of team assessments: multiprofessional assessments at a tertiary neurodisability centre, and a Stage 3 Code of Practice multidisciplinary assessment in an educational setting. No study has actually focused on the protocols of these two types of team assessment. Moreover, attempts to look for normative procedural patterns suggested by the diagnostic or group decision-making literature have reported difficulties in finding such procedural patterns in multiprofessional assessment events.

Thus, de Bruyn's (1990) study of the diagnostic multidisciplinary team conferences in an institute for residential mental care of children with serious learning and behaviour problems, found no adherence to the diagnostic normative sequence of Complaint-Problem > Diagnosis > Treatment.

Similarly, within the norms of 'organisational' or 'managerial' group decision making, educational placement team meetings were found to lack "an agenda and/or sequence of structured activities" (see e.g. Fenton *et al.*, 1977; Goldstein *et al.*, 1980; Ysseldyke, Algozzine & Mitchell, 1982; several articles in *School Psychology Review, Special Issue,* 12(2),1983):

> Generating and evaluating placement alternatives, presenting data, stating goals, and other important activities were engaged in sporadically and erratically until a solution, which seemed to satisfy some of the members, arose at the end of the meeting. (Ysseldyke, Algozzine & Mitchell, 1982, p.313)
>
> In 88% of the meetings observed, we could not ascertain the final decision made or who made it. (Ysseldyke, 1983, p.228)

Rather than developing any script from research on actual team assessments, the tendency has been to borrow normative scripts from the group decision-

making literature (see e.g. Jones, 1970; *School Psychology Review,* 12(2),1983; Huebner & Hahn, 1990). Thus a 3-stage problem solving sequence has been generally prescribed (see e.g. Kabler & Genshaft, 1983; Huebner & Hahn, 1990):

1. Perceiving the problem;
2. Exploring alternatives;
3. Selecting a solution.

This prescribed script has been criticised on two counts. Educationalists rejected its suggestion of the idea of an expert being approached to solve a problem on a one-off basis, since assessment is rather seen as "a continuous exploration by everyone involved to find the most realistic, practicable and specific way to support a child's learning and meet his needs" (Halliwell & Williams, 1993, p.176). Secondly, the rational approach of normative decision theory has been widely challenged by the increasing descriptive literature on decision-making behaviour in naturalistic environments (Klein *et al.*, 1993; Zsambok & Klein, 1997).

2.3.1.5. A Naturalistic Decision-Making (NDM) script

Normative decision theory focused on the choice phase in decision making, stressing the need for rational evaluation of the utility of all possible decision alternatives. The NDM script, on the other hand, focuses on an earlier phase in decision making (see e.g. Klein, 1997; Endsley, 1997; Orasanu & Fischer, 1997). It stresses the importance of the early process of building 'situation awareness' through which a course of action is developed, rather than the choice point itself. In NDM, decision makers have been described as following the following typical procedure:

1. Perception of elements in current situation
2. Comprehension of current situation
3. Projection of future status

Situation awareness

↓

4. Decision
5. Performance of actions. (Endsley, 1997, p.273)

No reference to assessment of children with disability was made at the first two conferences on Naturalistic Decision Making (Klein *et al.*, 1993; Zsambok & Klein, 1997). But a few studies have attempted to apply some elements of the above procedure to assessment of disability, as reviewed below.

2.3.2. Cognitive processes in decision making

The attempt to describe the processes engaged in by decision makers has been applied mostly within problem solving research, using individual think-aloud protocols (see review in Ericsson and Simon, 1993). A great variety of processes were investigated in different domains. Here it is useful to describe two studies on assessment of children with disability.

2.3.2.1. Situation awareness of Educational Psychologists

The NDM framework of situation awareness has been applied in one study of ecological decision making by educational psychologists over a six month period regarding ten children referred because of emotional and behavioural difficulties (Boreham *et al.*, 1995). The sequential aspects of the process were not studied. But from the pooled observation and interview data, they reported interesting findings on each of the three processes of situation awareness:

- *With regards to perception of the elements* of the cases, they found three

significant aspects in EPs' approaches: "reliance on prior knowledge of the school, scepticism about information sources, and seeing through attempts to sway their judgement" (p.19).

- *With regards to comprehension of the case,* they reported two frameworks used by the EPs: "diagnostic and temporal conceptual frameworks" (p.20); and

- *With regards to projection of future states,* they found that EPs projections were "not based on psychological diagnosis, or allocation of fault and responsibility, but on a pragmatic schema for affecting system adjustments to accommodate disturbances [to the system]" (p.23).

2.3.2.2. Sequential processes in diagnostic assessment

With regards to "the dynamics of the process" of diagnostic problem solving in the field of learning disability, Bus and Kruizenga (1989) identified eight different *actions* (see Table 2.3.2, below).

They applied a 'lag sequence analysis' (i.e. an attempt to study the sequential relations between processes) to the protocols of 20 reading specialists who were asked to think aloud as they processed the vignettes of two children referred because of reading problems. The vignettes were made as realistic as possible through the presentation of a variety of assessment materials and by allowing the participants to ask for additional information on the children. They concluded that the sequences of problem solving actions deviated from "prescriptions of scientific problem solving behaviour":

> First, it is striking that sequences such as enquiry > hypothesis, cognition > hypothesis, and interpretation > hypothesis do not occur. Apparently, information gathering happens without any hypothesis. .....
>
> Second, enquiry often occurs without interpretation. In the two cases of this study information gathering induced interpretation in 41% and 28% of occasions. In 17% and 23% of occasions, enquiry induced cognition

without producing interpretation as the next step. ... This result agrees with Vinsonhaler's findings that many information cues remain unused. .....

Third, it was found that in both cases a direct connection between interpretation and recommendation was lacking. ... the longer sequence interpretation > speculation > recommendation did not occur. These findings suggest that prescriptive recommendations are based upon speculations only partly embedded in facts. (Bus & Kruizenga, 1989, p.285-6)

Table 2.3.2:
Eight *actions* in Reading Specialists' diagnostic problem solving behaviour (Bus and Kruizenga, 1989, p.279)

Planning: naming topics on which information is desired without specifying the information.

Hypothesis: making assumptions or raising questions that prompt information gathering.

Enquiry: asking for specific tests or observations.

Cognition: literal or semantic reproductions of information.

Interpretation: making inferences from the findings.

Speculation: making inferences which are only partly based on the information cues.

Recall: recalling former experiences or theories concerning learning-disabled pupils.

Recommendation: stating remedial prescriptions.

These conclusions, however, need to be further investigated. For instance, think-aloud protocols are best adapted for recording the heeded information, while cognitive processes applied to that information have to be inferred (Ericcson & Simon, 1993). Thus, Bus & Kuizenga's first conclusion, cited

above, raises questions as to whether the subjects were in fact more frequently engaged in checking hypotheses which were not verbalised. The quantitative approach also failed to take into consideration the possible individual meanings of the exercise to the participants.

Within NDM research, it has been reported that diagnosis, involving causal reasoning, hypothesis generation, and hypothesis testing, is an essential process in decision making in ill-structured problems, especially in situations of uncertainty (Klein, 1997; Cannon-Bowers & Bell, 1997).

2.4. KNOWLEDGE FRAMES in decision making

The application of particular procedures in the decision-making process has been found to be strongly linked to the particular forms of knowledge structures relevant to particular domains of expertise. One of the widely accepted conclusions from studies of problem solving and decision making is that experts differ from novices in the ability to draw on previous domain specific knowledge to distinguish relevant from irrelevant cues, and to generate a more complete representation of the situation (see e.g. Serfaty *et al.*, 1997; Stokes, Kemper & Kite, 1997).

2.4.1. The concept of frames

It is assumed that people have abstract structures of knowledge through which they organise their perception, memory and interaction with the world. Within cognitive psychology, these structures have been generally called 'schemas' (or schemata). Often traced to Bartlett (1932), the concept of schema was operationalised within artificial intelligence research. It was suggested that "the

expectation-driven aspects of recognition and comprehension" presupposed 'special devices' for organising and selecting relevant knowledge (Minsky, 1975). Minsky described these special devices as abstract *frame*-like category structures stored in memory:

> When one encounters a new situation (or makes a substantial change in one's view of a problem), one selects from memory a structure called a frame. This is a remembered framework to be adapted to fit reality by changing details as necessary. (Minsky, 1975, p.212)

Thus the term *frame* is applied to structures of knowledge of objects or scenes: e.g. a frame of *what* a kitchen looks like, what items it includes and how they are spatially organised and used; or a frame of disability, its manifestations, implications for the person, for the family, for schooling and work.

2.4.2. Disability frames

Structures of knowledge on disability have been mostly associated with models of normality and disability developed within the specific approaches and training of the different disciplines (see e.g. Wedell, 1975; Sandow, 1994; Tyrer & Steinberg, 1998). But they have been more recently seen as including also the wider conceptualisations of disability shared within community and professional cultures (Galloway, Armstrong & Tomlinson, 1994; Farr & Markova, 1995).

Since the 1980s, in the UK, there have been important changes in conceptualisations of disability through: (a) new perspectives and experiences in socio-economic and political thinking and practice, especially the impact of a market economy and concepts of individual rights, entitlement and choice; (b) new sociological frames of disability expounded most forcefully by disabled researchers who have established a disability movement at the research level; and (c) new frameworks for psycho-educational practice (see review by Corbett & Norwich, 1997).

2.4.2.1. Medical versus social model of disability

Current professional practice reflects a plurality of frames. These have generally been categorised as falling within one of two major schemas: either one that focuses on the *within-child deficit* (and often termed the *medical* model - see Tyrer & Steinberg, 1998), or one that focuses on the problem as lying within *the child's environment* (and often termed the *social* or *socio-political* model). These models are distinguished on the basis of their attribution of the causes of the problems associated with disability. Figure 2.4.2.1 below, shows the variety of possible attributions of causes. The multiplicity of causes are shown within a pot and flower figure, the flower representing the child and the pot his or her environment.

The medical model

The *medical model* is based on a schema of bio-psycho-social normality which is expected to be met by children at the various developmental ages (see top part of Figure 2.4.2.1a & b). Though called "medical", this model really encompasses all those approaches that conceptualise the assessment task as a *diagnosis of individual disorder* (see Tyrer & Steinberg, 1998; Figure 2.4.2.1b). Thus, for instance, a 3-year-old is expected to have a particular height, weight and head circumference proportions (bio-physical); a certain level of self management and relationship skills (emotional development); and certain levels of functional skills - attention control, playskills, language skills (developmental functioning). If a child deviates from these norms, then he or she is seen as having an impairment that is the cause of the problems identified by the carers.

The social model

On the other hand, one might approach the same problems identified by the carers as in fact being the result of *the child's environment*. A schema of human beings as being basically diverse, all with equal entitlement to a high quality life, regards inadequacies in the environment (the pot in Figure 2.4.2.1a, above) as creating problems for a particular child (Barnes & Mercer, 1997). These problems might arise from intolerant attitudes to diversity held by parents or by society at large and its institutions - educational, community, political. Problems might also result from inadequate socio-economic and educational provisions that do not cater for the diverse characteristics of this child.

Different recommendations for remedial action result from the two contrasting models: the medical model proposes working for changing the child towards expected criteria of normality; the social model proposes changing the environment in order to adapt it to the diverse needs of this child.

Figure 2.4.2.1a:
Within-child and within-environment perspectives on early childhood disability

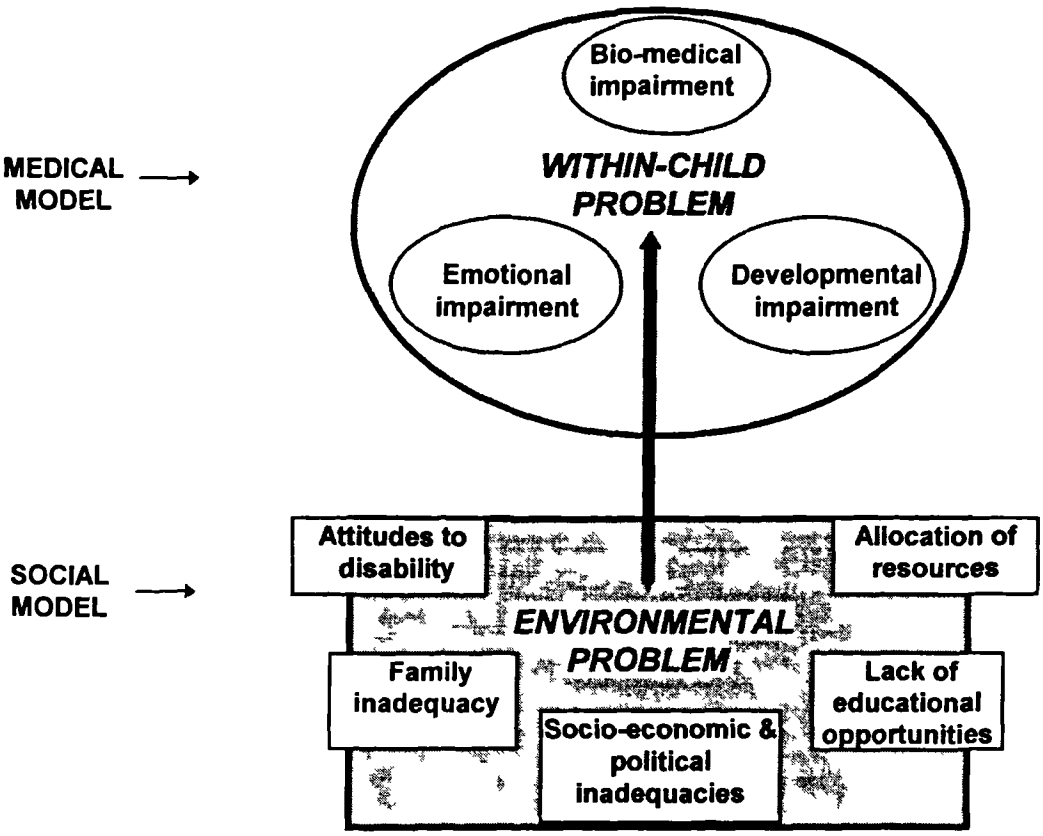
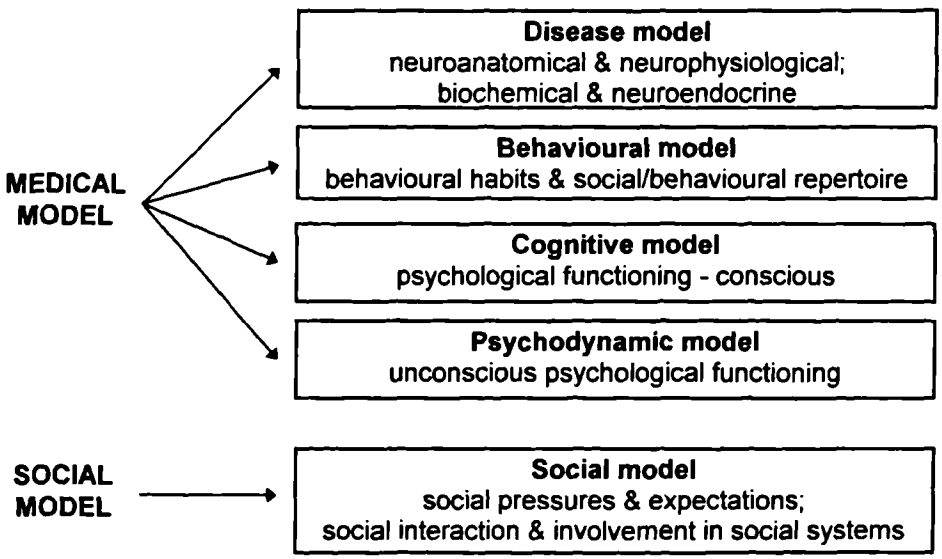


Figure 2.4.2.1b:
Five models & relevant clinical observations of mental illness
(adapted from Tyrer & Steinberg, 1998)



A variety of disciplinary perspectives within the two models

Prescriptive texts on the approaches of the various disciplines involved in dealing with problems arising from disability often present the approaches as separate models (see e.g. Wedell, 1975). Tyrer & Steinberg (1998), however, describe five models within one discipline, namely psychiatry, to assessment and intervention in "mental illness" but which have a similar bearing on developmental disability (see Figure 2.4.2.1b, above).

Most professionals and current research on professional practice in fact tend to see disability as the result of an *interaction* between inadequacies within the child and those in the social and physical milieu (see e.g. Wedell, 1995; Daniels, 1995; Lindsay, 1995; cf. Tyrer & Steinberg, 1998). This is shown in Figure 2.4.2.1a, above, by the two-way arrows of the stalk. Thus professionals might also try to change both the child and his or her environment concurrently or in stages.

It is not within the scope of this study to evaluate the merits of each model. However, it is important to outline the possible impact of these the two major approaches on practitioners' and clients' conceptualisations of the assessment task.

Applications of the medical and social models to assessment and intervention

The implications of the two models for assessment and intervention have been most explicitly made with regards to children with physical disability. One widely known approach to children with cerebral palsy has been the Conductive Education programme, first developed in Hungary. This programme is aimed to help children achieve independent mobility by strengthening the child's will to walk and manipulate the world. It requires the child's participation in a regime of constant independent exercises carried out

by a whole group of children with physical disability.

In the UK, non-disabled researchers and administrators have focused on arguments about whether this programme can really deliver in terms of helping to improve children's mobility as much as it claims. In contrast, the disabled movement's focus has been on the philosophy that underpins the programme, and have severely criticised it as entrenching the medical approach:

> The current popularity of 'conductive education' is a product of this ideology of the able-bodied individual, for its aim is to teach children with cerebral palsy to walk, talk and engage in all other activities in as near normal way as possible. No consideration is given to the issue of the ideology of 'normality' nor to the idea that the environment could be changed rather than the individual ... And scant regard is paid to the costs involved in terms of pain, coercion, loss of childhood, disruption of family life, acceptance of alternative ways of doing things and so on. (Oliver, 1990, pp.55-56)

The emphasis on inclusion and non-segregation of persons with disability has led to a rejection of the use, in any form, of the term 'special' for these persons. Thus, while the *Warnock Report*'s (1978) use of the term "Special Educational Needs" has been interpreted by many as moving away from the medical model and emphasising the need for adapting provisions to meet the child's needs, proponents of the social constructivist view have criticised it as mere 'rhetoric':

> Despite the benevolence behind this rhetoric, special education is an exclusion from mainstream education. The concept 'special needs' is often used in a mystifying manner, directing attention away from the needs that are actually being served by the expansion of special education. It is an obfuscation of the issue since categorisation or assessing children into special education disguises the reality that they are not wanted in the ordinary schools. ...
>
> 'Special Needs' have become the rationalisation by which people who have the power to define and shape the special education system, and who have vested interests in the assessment of and provision for more and more children as 'special', maintain their powers. The rhetoric is 'needs' and humanitarian, the practice is control and vested interests. (Barton & Tomlinson,1981, pp.23-24)

These views have gradually started to make an impact on policies and legislation, as well as on assessment practice, as reviewed below. However, in

practice, the medical and social models are more complexly intertwined in a pluralistic educational situation where "the values of choice and diversity (market values) come into conflict with those of equality and social cohesion (inclusion values" (Corbett & Norwich, 1997).

2.4.2.2. Medical versus educational models in assessment

Disability is not a disease

Within professional practice, an important distinction has been made between the *medical* and *educational* models of disability.

- Within the *medical* model, disability was initially regarded like any other disease. Doctors tried to diagnose the disease process to provide a medical remedy (drug, surgery or therapy). Over the past two decades, this approach has been widely recognised as problematic when dealing with a developmental problem:

  > In most of these clinical problems, no organic pathology can be detected except perhaps minor contributory defects, such as secretory otitis media or squint. ... The response dictated by the medical model is to diagnose a disorder, for example 'speech delay' or 'clumsiness'. Sometimes other titles, which make unjustified assumptions about the cause of the difficulty, may be used, for example 'minimal brain dysfunction'. These terms are really no more than circular definitions and add nothing to the understanding or management of the problem. (Hall, 1984, p.19; cf. Corbett, 1994)

- The *educational* model, on the other hand, has as a primary aim the assessment of the child's strengths and needs, setting targets for the next steps in learning, and determining how these can be achieved and what kind of parent, professional, and educational support is required for the child to make progress (*ibid.*, cf. Wedell, 1995).

Within the educational model, moreover, there is a recognition that part of the problem (though not all, as in the social model) lies in the environment; and that one needs to address the concerns of the parents, carers and educators who are experiencing the child's development as problematic as well as the impairment within the child (Booth, 1978).

Diagnosis versus assessment

The above distinctions between the medical and educational approaches have sometimes been represented as a contrast between *diagnosis* and *assessment*. Different types of knowledge structures have been associated with each:

- *Diagnosis* looks at a child's condition in terms of its commonality with existing scientific knowledge about similar conditions. It consists of a judgement on the *classification* of the child's condition (i.e. providing a label) or its *causation* (see e.g. Cohen & Volkmar, 1997; Rapin, 1997; cf. Klein, 1997). Such diagnosis is regarded as an essential characteristic of medical expertise:

  > For the student and practitioner of medicine, the establishment of a diagnosis reflects the acme of clinical skill. The ability to interpret symptoms and signs into a clinicopathological construct for which there may be one or two words, represents symbolically as well as in real terms the culmination of the art and science of clinical medicine. (Rubin, 1992, p.465)

- On the other hand, *assessment* involves the collection of more detailed and individualised information about "skill levels, learning styles, patterns of strengths and weaknesses, and potential for successful treatment and adaptation" (Marcus & Stone, 1993, p.152; cf. Marcus & Schopler, 1993; Lamond *et al.*, 1995). Within educational and social work settings, labelling children's difficulties is regarded as politically incorrect, being associated with prejudicial focusing on within-child deficits. Since the late 70s, especially as captured in the Warnock Report (1978) in the UK, the desirable focus has

been on the determination of what individualised special provisions (i.e. within-environment) were required to meet the child's 'special educational needs', without even requiring the categorisation of the child's disability (Bryans, 1993).

Mixed approaches

However, actual medical and educational practice and the relevant prescriptive literature may involve a mixture of both diagnosis and assessment.

Thus, **medical diagnosis** is moving away from mere labelling to a concurrent consideration of accompanying psychosocial problems. 'Psychosocial and environmental problems' constitute one of the five axes in the standard multiaxial psychiatric assessment system of the DSM-IV (1994 - first introduced in DSM-III, 1980), and was introduced even earlier in World Health Organisation perspectives (see Marcus & Schopler, 1993). The current literature has moved from a previous emphasis on the scientific or technical search for a medical diagnosis to a stress on (a) the uniqueness of the individual's difficulties as well as strengths: "A diagnostic label is not able or intended to capture the fullness of an individual" (Cohen & Volkmar, 1997, p.2; cf. Rubin, 1992); and (b) on diagnosis being only a *means* for developing a treatment programme: "Diagnostic classification systems and specific assignments to a disease or disorder category are tools for crafting a helpful understanding and correct treatment" (*Ibid.*). Indeed, diagnosis and assessment are seen as occurring sequentially within an evaluation:

> Diagnosis is an essential first step in the assessment and treatment process ..... Individualised and comprehensive assessment of developmental and functional skills across contexts provides the foundation on which to build an effective intervention programme. (Marcus & Schopler, 1993, pp.350-352)

Moreover, medical and behavioural assessments are becoming more intertwined through necessary interdisciplinary procedures. Thus the evaluation of medical intervention in disability may require neuropsychological and behavioural assessment in various domains of functioning (Cohen, 1996). On the other hand, social and behavioural intervention may require refined diagnostic classification (group subtypes) in relation to specific intervention approaches as well as the possible use of medical (physiological) assessment (e.g. imaging techniques) to measure treatment outcome (McIlvane, 1996).

Similarly, **within educational settings**, the issue of classification of the child's condition for the determination and acquisition of resources for ensuring the child's progress, even if 'politically incorrect,' remains a moot point (Bryans, 1993; Norwich, 1996). The rejection of labelling is challenged especially in practice by the vociferous associations representing the interests of persons with specific categories of disability like dyslexia, autism, and ADHD (see e.g. Riddell, Brown & Duffield, 1995; Keen, Olurin-Lynch & Venables, 1997). The UK 1994 Code of Practice has in fact identified some 'different' kinds of learning difficulties such as 'specific learning difficulties and emotional and behavioural difficulties'. This has been seen by some as 'a return to bad days', but is also a confirmation that:

> The concept of SEN which has been connected with curriculum based assessment cannot deny and avoid the importance of categories of impairment for meeting educational need. (Norwich, 1996, pp.19-20)

It is not only the parents' struggle for resources that is pushing for more diagnostic formulations by psychologists, but also inter-professional interests. There seems to be a general understanding that "Strictly speaking, psychologists lack a disciplinary mandate to diagnose" (Pilgrim, 1998, p.109; cf. Herbert, 1998). However, within the increasingly legally-based system for assigning benefits through diagnostic certification, this is being questioned:

> 'Do we have a mandate to diagnose?' We do and we don't. We need to empower ourselves properly and learn this limited skill, and then extend

> fully into meaningfully embracing the dynamic underpinnings of psychopathology. Otherwise we will remain talking largely to ourselves, raising our eyebrows helplessly as the medical model burrows deeper into the Mental Health Service's psyche. (Ruthenberg, 1998, p.523)

It is useful to see what use of diagnosis and assessment processes practitioners make in medical and educational settings.

2.5. The impact of decision-making GOALS

The above contrasts between diagnosis and assessment may be seen as related to different goals of a consultation.

The importance of goals in decision making is being increasingly recognised in NDM research. The existence of "shifting, ill-defined, or competing goals" are a main feature of NDM contexts (Orasanu & Connolly, 1993). The decision maker's goals lead to a particular focus on the perception and understanding of the problem situation:

> Situation awareness is impacted by a person's goals and expectations, which influence how attention is directed, how information is perceived, and how it is interpreted. ..... Activities are then selected by the decision maker that will bring the perceived environment into line with the person's plans and goals based on that understanding. (Endsley, 1997, pp.276-7)

This focusing effect of goals on decision making is similar to that described in the literature on "question framing" (see e.g. Tversky & Kahneman, 1981; Legrenzi & Girotto, 1996).

2.5.1. Who is the client?

One of the ways in which the goals of a consultation are set is through the construction of who is the client. In assessment of disability there are a multiplicity of possible clients leading to possibly competing goals: the child himself or herself, the parents or carers, the teacher, the school, LEA, Health or other service organisation. The operation of these competing constructions of who the client is has been observed especially in decision making by educational psychologists:

> When a child is referred for assessment this is unlikely to arise solely from a disinterested concern to establish if the child has special educational needs. Reasons for referral will also be related to teachers' expectations of the outcome of the referral. These might include the acquisition of additional resources, the removal of a troublesome child, or a promise to act quickly if matters deteriorate in the future. Thus educational psychologists do not *and cannot* simply assess the child, they must also respond to the teachers' legitimate expectation of receiving a professional service. In practice, therefore, psychologists may feel constrained to negotiate a solution that is acceptable to the school because the school is also their 'client'. In this sense, the LEA, too, is the psychologist's client since its expectation is that the advice of the psychologist will assist in the allocation of scarce resources. (Galloway, Armstrong & Tomlinson, 1994, pp.63-64)

The issue of child advocacy has been especially raised vis-à-vis the parents in cases of child abuse, but important ethical and practical considerations also arise vis-à-vis the school (McMahon & Pruett, 1998).

2.5.2. What is the assessment for?

2.5.2.1. Supporting the child's progress versus getting resources

Even with the same client, there may also be competing goals in how he or she is best served. For instance, an assessment which is aimed to serve the child as the main client might be undertaken in order to determine strategies for

supporting the child to make day to day educational progress. In this case the focus would be on the child's strengths and needs, emerging skills, the next steps that need to be learned and how they are going to be taught. However, in another assessment, the same child may be seen to be served by ensuring that the needed extra provisions are obtained for the child. In that case the focus is on what resources are available and what features in the child's characteristics are likely to justify the provisions.

2.5.2.2. Acquiring information versus therapeutic goals

Another major goal that might determine the decision-making process in psychological assessment has been termed the *therapeutic* goal, i.e. the aim "to produce positive change in clients" (Finn & Tonsager, 1997, p.374; cf. Parker & Zuckerman, 1990).

This distinction is especially relevant to the delivery of the bad news about the child's disability to the parents. The experience of discovering that one's child has a disability requires adjustment by the parents to the breakdown of their expectations of a non-disabled child. This adjustment has been explained through a variety of models (see Dale, 1996; Siegel, 1997):

- The parents may be seen to undergo a grieving process, from initial shock, to denial, to sadness and anger and anxiety, to adaptation and reorganisation (see e.g. Siegel, 1997). This process might be cyclical rather than linear, and different parents go through the process in different cycles and with different intensities and duration.

- The phenomenon may also be seen as one of Chronic Sorrow, adjustment being a long term process allowing for chronic sadness to co-exist with acceptance of the child's disability in terms of competency and caring (Olshansky, 1962).

- The parents may be seen as engaged in a process of trying to make sense of the world: they initially experience confusion and uncertainty as their expectations are broken, and then gradually rebuild a new framework by forming a clearer idea about the child's condition and future possibilities (Cunningham and Davis, 1985).

There is thus great potential for either a therapeutic or a damaging impact on the parents through the way the bad news is delivered:

> The session can be a therapeutic turning point for parents, as they are helped to understand their child's needs and plan for his or her future treatment and well-being. Or the session can be a brief, confusing, emotionally devastating lecture about the child's deficits, defects, and labels. The difference derives largely from the professional's commitment to the importance of the interpretive session, and skill in presenting findings in a way that is most helpful to families. (Shea, 1993; cf. Cottrell & Summers, 1990; Wakschlag & Leventhal, 1996)

Within psychotherapy practice, this therapeutic aspect of the initial interview with the client has been regarded as a main frame for the session. The first interview may require giving the patient a taste of treatment, and may or may not require establishing a relationship with the patient (Menzies, 1996). But all assessments are seen as needing to include therapeutic goals:

> The assessment process itself should seek to enhance parents' understanding of their child, improve the fit between the parents' caretaking style and the child's behaviours, empower and support the parents in their crucial role as the child's most significant caregivers, and model constructive ways to interact with the child. (Parker & Zuckerman, 1990, p.365)

2.5.2.3. Organisational goals

Assessment goals may also be significantly influenced by organisational goals which may or may not be shared by the various professionals and parents. For instance, if an organisation has strong research goals, what information is collected and how it is collected may be highly determined by the requirements

arising from the research goals. This highlights the noted contrast between the individualised goals of the client and the generalised goals of services or research:

> Where the consumer is focused on the individual manifestations of autism in a member of the family, the scientist is concerned primarily with those characteristics shared by most members of the group. (Schopler, 1996, p.278)

Because of the way services are funded, organisational goals may also be more constrained by the legal framework within which a service is given:

> The practice of assessing students takes place in a social, political, and legal context. Much assessment takes place because it is mandated by law. School personnel are required to assess students before declaring them eligible for special education services. (Salvia & Ysseldyke, 1991, p.61)

Litigation has been constantly a part of the "rights" framework for special education in the USA (Kirk & Gallagher, 1983), but even in the UK parents are increasingly turning to litigation to ensure appropriate levels of provisions (Galloway, Armstrong & Tomlinson, 1994; Bibby & Lunt, 1996).

Empirical evidence is required in order to understand how organisational and professional goals influence the focus of the decision-making process in assessment of disability.

2.6. NEGOTIATION structures in the assessment

As has been observed in chapter 1, assessment of disability is inherently a social interactive task. Both the formulation of the nature of the problem and recommendations for remedial action are negotiated between the professionals and the clients. Moreover, in multiprofessional and multi-agency assessments, this negotiation dimension is widened to include inter-professional negotiations.

2.6.1. Need for negotiating supportive perceptions of the child's disability

One of the main criticisms of the medical model has been its disregard for the social construction of the child's disability. In the medical model, a child's disability may be seen as simply fitting into a category of the *International Classification of Diseases* (ICD-10, 1992) or the *Diagnostic and Statistical Manual* (DSM-IV, 1994) of the American Association of Psychiatrists. The social model, as described above, suggests that in fact each child's disability is defined, and indeed *constructed* in his or her social milieu and does not exist independently of it (Booth, 1978). One indication of this fact is that children's scores on psychometric tests do not predict placement decisions about them (Vance *et al.*, 1988).

This social aspect in the identification of disability was clearly described by Macdonald (1981):

> The reason for a detailed or special assessment rarely arises simply from a direct and early medical diagnosis. In the majority of cases an assessment is the result of a *socially identified* problem. That is, for one reason or another, a relationship is unsatisfactory or causing distress: a parent may feel worried that their child is not apparently developing like others they know; a teacher may be worried about a child who is consistently unable to keep up with classmates; a health visitor or doctor may be worried by behaviour during routine visits or surgery. In all cases someone will be concerned that something might be wrong. They will have come to this conclusion by feeling uneasy, in comparison with their expectations. ...
>
> Therefore the assessment cannot only be concerned with identifying the problem within the child, but must take into account the social context, in the knowledge that an easily identifiable cause and prognosis is unlikely. (pp.90-92)

Despite this need for joint understanding of the problem, social constructivist research has been very critical of the negotiation relationships between professionals and clients.

2.6.2. Macro- and micro-social constraints on negotiation

Professional-client and inter-professional negotiations have been most widely studied through a socio-linguistic approach. In doctor-client studies, this approach reframes the physician's role "from an objective, dispassionate giver of advice, to an interactional partner who actively participates in the social construction of illness, its treatment and outcome" (Burgess, 1986, p.53).

Studies have mostly focused on the asymmetrical interaction in terms of power, expertise and distribution of interactional space, with authority figures seen as imposing their frames on clients (e.g. Mehan 1983; Fisher & Todd, 1986; Maynard, 1991; Parrott, Greene & Parker, 1992; Beck & Ragan, 1992; Gutkin, 1996).

Such professional impositions are seen to occur at two levels: (a) the **macro-** or socio-political and organisational level, which are seen to structure the professional-client encounter; and (b) the **micro-** or local interactional level, which looks at how professionals and clients actually structure and experience their encounter (Fisher & Todd, 1986; Gill & Maynard, 1995). While there is an unending debate on which level has the major influence on the other, there is acknowledgement that the two levels are in interaction (Fisher & Todd, 1986). Empirical research, however, has tended to focus on one or the other levels of analysis (see e.g. Mehan, 1986; Gill & Maynard, 1995).

2.6.2.1. 'Organisational' level processes

At the "organisational" level of analysis, the professional-client encounter is looked at as an "event" that is not being entirely locally produced but as being significantly framed or constrained by an institutional order (Burgess, 1986;

Mehan, 1991; Galloway, Armstrong & Tomlinson, 1994). Using discourse and ethnographic analysis, this approach shows for instance, that discourse in medical interviews is arranged to facilitate the accomplishment of institutional goals:

> These analysts are demonstrating that the institutional authority of the doctor structures the discourse, shapes the flow of information, and influences the process of medical decision making. Not only do the professional and institutional affiliations of the professionals vest them with authority, but since practitioner and patient share a common social world, the view of the practitioner-patient relationship is shared. Consequently patients are often easily persuaded that their best interests are served by the physician's recommendations. The emphasis on institutionally situated language events enables discourse analysts to consider the influence of such nonlocal factors on interactions, the production of meaning, and consequent practical outcomes. (Burgess, 1986, pp.53-54)

This approach is best illustrated here by Mehan's (1981; 1983; 1991) analysis of team decision making for the placement of children with disability. In an ethnographic approach in the analysis of 53 cases of Educational Placement Team final decision meetings, Mehan distinguished between 'distal' and 'proximal' influences on the work of "sorting students" (Mehan, 1991; cf Galloway, Armstrong & Tomlinson, 1994). Distal influences originate outside the immediate circumstances of the institution: government agencies, public policies, administrative or fiscal constraints and the course of institutional practice; proximal influences consist of the order among the phases of the meeting, the sequence of turns within each phase, and the meaning and consequence of what was said. He argued that distal constraints were the most influential, citing as an example the fact that the parents' right to request out-of-district placement was only given lip service and not really offered as an option, because of decisions taken at higher administrative levels.

2.6.2.2. The 'local' interactional level of analysis: asymmetrical or joint constructions?

With regards to the 'local' interaction structure, Mehan (1983) again saw the process as one of imposition of official professional constructions of the child's

difficulties on the clients through a "discourse of persuasion". He cited as part of the evidence the contrasting mode of presentation between authoritative and categorical "professional" reports of the psychologist and nurse, and the experiential and contextualised "lay" reports of the mother and the teacher (see Table 2.6.2.2, below).

Table 2.6.2.2:
Contrasting features in lay versus professional reports presented at team assessments (Mehan, 1983, pp.157-8)

Lay *(Mother's and teacher's reports)*	**Professional** *(Psychologist's and nurse's reports)*
1. They were elicited.	1. They were presented, not elicited.
2. They were made available by people who occupy either low status or temporary positions (both in terms of institutional stratification and distribution of technical knowledge).	2. They were presented by people who occupy high status and permanent positions.
3. Their claims to truth were based on common sense knowledge.	3. Their claims were based on technical knowledge and expertise.
4. Their reports were based on direct albeit unguided or unstructured observations.	4. They were based on indirect albeit guided or structured observations.
5. They offered contingent assessments of student performance.	5. They offered categorical assessments of student performance.
6. They resulted in a context-bound view of student disability.	6. They resulted in a context-free view of student disability.

Similar asymmetries were reported on teacher-pupil interaction in a school that espoused a progressive pedagogy (Chouliarake, 1998). Defining discourse

framing as "the forms of regulation enacted in talk between teachers and pupils," the study reported a strong institutional and teacher framing of teacher-pupil social interaction sequences through:

- Wh- questions which ultimately yielded teacher-oriented answers;
- the strong 'pacing' and timing of the activity which left minimal time for extended interactions and space for finely adjusted teacher-pupil talk; and finally,
- the use of guideline questions, which strictly defined the parameters within which the activity should be measured: the questions were either closed (requiring a yes/no answer) or formulated in terms of classroom specific discourse, thus orienting pupils' answers strictly to the rules of practice.

Some researchers, making use of conversation analysis, have questioned the above generic view that all professional-client interactions are asymmetrical. Thus, in an analysis of data collected at clinics specialising in developmental disabilities, Maynard (1991) showed how professionals were very cautious about the ways in which they delivered diagnostic news: how they in fact avoided disagreement by first eliciting the parents' perspective on the child's difficulties and then elaborating it. This pattern seemed directed "like much ordinary interaction, to preserve a visible social solidarity" (p.165). Professionals and parents were jointly engaged in a common goal:

> The structural effect is to exhibit various institutional characteristics of the encounter, including (a) participants' orientation to the existence of a clinically relevant problem, and (b) the parties' consequent involvement in the lay-professional relationship as a continuing course of action. (p.165)

Mehan's approach to labelling was criticised as "providing little purchase on how the participants in these meetings, rather than responding mechanically to "distal" forces, display *their* analyses of and orientations to structural facets of the social environment in their interaction" (Gill & Maynard, 1995, p.14, author's italics). Professionals and parents collaborated in producing the labels:

> Participants, aware of both the uncertainties and the exigencies of social contexts, continually operate in concert to shape the trajectory of labelling and children's fates. Often, parents go along with what clinicians declare, but this hardly means that professionals impose something upon passive lay people. If either set of actors lacks anything, it is not sophistication, but rather naiveté, with regard to what

> they are doing and its likely consequences for the child. (Gill & Maynard, 1995, pp.30-31; cf. Abrams & Goodman, 1998)

Similarly ten Have (1991), who analysed doctor-patient consultations in general practice in the Netherlands, concluded that patients were also responsible for the asymmetries:

> Consultations are sometimes almost like conversations [i.e. among peers]. At other times they resemble interrogation. But mostly they are somewhere in between, zigzagging between the two poles in a way that is negotiated on a turn-by-turn basis by the participants themselves, whether they are Anglo-Saxons or Dutchmen. (p.162)

2.6.2.3. Mixture of voices among professionals and parents

A similarly interesting contrast of findings has been reported with regards to the diagnostic reference worlds used by professionals and clients. Mishler (1984) reported conflicts between the professionals' "voice of medicine" and the patient's "voice of the life world: one is technical, scientific and decontextualised, while the other is tied to the client's contextualised life-world experience."

More recent research, however, has found a complex intermixture of voices: patients "sometimes appropriate perspectives on themselves and their health problems characteristic of the voice of medicine" (Aronsson et al, 1995, p.133). Similarly, in assessment of behavioural difficulties, Keen *et al.* (1997) reported an

> apparent role reversal between parents and professionals over the issue of diagnostic labelling. ... Parents are now demanding diagnostic labels for children's unusual difficulties. (p.84)

2.6.2.4. Professionals' negotiation of the bad news

One feature that has been highlighted through the above conversation analytic research is the way in which the diagnostic formulation of the child's disability becomes a joint product of the professional-client interaction (Gill & Maynard, 1995; Abrams & Goodman, 1998). The issue of how to break the 'bad news' to clients has long been recognised as an important one for health-care professionals (Buckman & Kason, 1992). The bad news has been defined as "any news that drastically and negatively alters the patient's [in our case the parents'] view of her or his future" (*ibid.*, p.11). It is thus especially relevant to assessment of young children with disability because the problem is often tied to questions of how the child will develop in the near and adult future. The issue is closely linked to therapeutic goals of assessment (see #2.5.2.2, above).

2.6.2.5. The influence of perceived future accountability

Participants formulate their decisions not only in response to each other's immediate interaction, but may also be structuring their thinking vis-à-vis relevant persons to be dealt with in the future. For instance, Aronsson (1991), in an analysis of the interaction between a paediatrician, a teenager with asthma and his mother, found that the mother's interaction reflected a frame of her *anticipated* future dialogues with the football coach and with her husband in talking about the boy's possibility of playing the game.

This idea of immediate or future accountability has been seen as an important 'political' dimension of decision making (Tetlock, 1992). Decision makers may be highly influenced by their consideration of how they are to account for their decisions to the persons to whom they are responsible.

2.6.2.6. The influence of inter-professional contexts

Within multiprofessional assessment, the professional-client interaction is further structured by the inter-professional interaction. This 'political' dimension in assessment of children with disability is more obvious because such assessment is practically, and statutorily mandated to be, interdisciplinary and indeed inter-service (Davie, 1993; Dale, 1996). Interdisciplinary case conferences are regularly held to decide on the special educational needs of children that are to be Statemented. Such meetings are intended to integrate the different perspectives on the child as a "whole individual" surrounded by the various professions and services. However, it has been observed that these meetings have an added dimension to their gathering of information and prioritising services for the child. They have "covert functions which relate more to the processes of negotiation and socialisation,"

> not only meeting the needs of individual children, but also the efficient management of resources and the reconciling of a variety of different interests, including those of parents, teachers, psychologists, health and social services professionals, administrators and politicians. (Goacher *et al.*, 1988, pp.99-100; cf. Smith, 1982; Gerber & Semmel, 1984)

It has been argued that these negotiation functions may become a priority:

> The primary role of multidisciplinary assessment, whatever the ideal of its advocates, is to provide an arena for these negotiations. (Galloway *et al.*, 1994, p.151; cf. Armstrong *et al.*, 1991)

Moreover, these negotiations are often viewed in a very critical light:

> There can be few if any readers unaware of the problem of poor co-operation and collaboration between the various professionals and services concerned ... (Davie, 1993, p.133)

This situation has raised two main concerns: (a) that inter-professional negotiations lead to the marginalisation of client perspectives (Tomlinson,1981; cf. Marks, 1992, 1993; Galloway, Armstrong & Tomlinson, 1994); and (b) that the different power and status levels of the various participants lead to unbalanced consideration of professional perspectives. For instance, at educational placement team meetings, regular teachers were found to be "the least active participants in making suggestions about what ought to be done

with and for students," such decisions being dominated by the special education teacher, school principal and psychologist (Ysseldyke, 1983, p.227).

On the other hand, teacher referrals have been found to be the most important predictors of decisions about children's classification both in the USA (Ysseldyke, Algozzine & Epps,1983) and in the UK:

> In practice informal negotiations between teachers and psychologists are perhaps the most significant multidisciplinary assessment events ... The assessment which follows may be seen as a bureaucratic process for effecting the outcome. (Galloway, Armstrong & Tomlinson, 1994, p.142)

Moreover, inter-professional conflicts were found to have important consequences on how a child's needs were defined, such as a doctor's failure to mention a child's medical needs because he or she was expected not to interfere with an LEA's allocation of resources.

With more specific reference to the interdisciplinarity of the decision-making process during an assessment event, there is concern as to how far there is an integration of the application of the different disciplinary frameworks on disability for the client's best interests rather than a mere inter-professional power struggle. A tendency towards the latter process has been observed:

> Each practitioner slants the discussion in favour of his or her preferred model and a power struggle develops between them. The approach chosen is usually that preferred by the dominant figure in the discussion and, to some extent, the others tend to go away dissatisfied. (Tyrer & Steinberg, 1998, p.103; cf. Christensen & Larson, 1993; Tindale *et al.*, 1993)

There is certainly a need to understand better what type of, and how, integration of approaches occurs or fails to occur during a multiprofessional team assessment of children with developmental disability.

2.7. Conclusion

2.7.1. Questions raised by the theoretical framework

This chapter has presented an account of theory and research on the four types of frameworks that have a significant influence on multiprofessional decision making in the assessment of children with developmental disability. It became evident that there is need for research to describe how each of the frameworks may be activated and used in decision making by multiprofessional groups in real field settings:

- Firstly, what kind of *procedural frameworks* are applied regarding the organisation of the whole assessment event and particular information processes? The application of the three processes of situation awareness described in NDM research (perception, comprehension, and projection) was presented as a possible avenue for understanding professionals' decision-making processes.

- Secondly, what types of different *knowledge structures* are activated and how do they lead to different understandings of the problem? The particular impact of different models of disability related to different disciplinary orientations on the assessment of the same young child and his or her family is another interesting question calling for empirical research.

- Thirdly, what different kind of assessment *goal structures* are entertained by multiprofessional groups in different settings, and how do these impact on the decision-making process? Research is needed to identify which clients multiprofessional groups actually seek to serve, what goals do they entertain for their clients, and what organisational goals may be applied. We also need to describe how actual goals impact on the search for information and its interpretation, as well as on the formulation of recommendations for meeting client needs.

- Fourthly, how are the formulations of the nature of the child's and family difficulties and recommendations for their support further influenced by the institutional, inter-professional and professional-parent negotiation structures? There is again a need for field research to describe the ways in which the social interaction context influences the application of the different knowledge and goal frameworks to assessment of early childhood disability.

Finally, there is also a need for studying the inter-relationship of the application of these four frameworks during the real dynamic assessment process. How are the four frameworks interactively applied to the assessment of a particular child and family?

No study has yet attempted to study the interactive application of all four frameworks in assessment of disability. However, it is useful to conclude here with one attempt to describe the dynamic linking of at least two of these structures, namely the knowledge and negotiation frameworks, in the paediatric examination of a child with cerebral palsy in the presence of his mother (Tannen & Wallat, 1987).

2.7.2. A research example of the study of intertwined knowledge and negotiation structures

The paediatrician was having the examination videotaped so that the recording would be used as a demonstration video for professional training.

Tannen and Wallat found evidence of the impact of the different *knowledge schemas* of the doctor and the mother about health in general and cerebral palsy in particular. For instance, the mother associated "noisy breathing" with "wheezing" and thus feared the child might be having respiratory difficulty. On the other hand, the doctor associated the noisy breathing with cerebral palsy, and saw it as an expected and harmless result of poor muscular control. These mismatches were found to account for the doctor's lengthy explanations, the mother's discomfort and recurrent questions, which in turn

led to needs for the doctor to switch between examination and consultation frames.

The doctor was also seen as balancing three major social interaction frameworks for three different audiences: a "social encounter frame" with the child as she examined him; a concurrent "examination frame" as she carried out his physical examination and adopted the "reporting frame" for the future video audience; and a "consultation frame" with the mother:

> The social encounter [frame] requires that the doctor entertain the child, establish rapport with the mother and ignore the video camera and crew. The examination frame requires that she ignore the mother, make sure the video crew is ready and then ignore them, examine the child, and explain what she is doing for the future video audience of paediatric residents. The consultation frame requires that she talk to the mother and ignore the crew and the child - or, rather, keep the child "on hold," to use Goffman's term, while she answers the mother's questions. (p.65)

There was also a collaboration in the negotiation of these frames. For instance, in contrast to the rest of the examination, the mother came in with a question in only 3 of the 17 episodes of the doctor's reporting frame; and when she did, her own contribution had 'a comparative clipped style' to the doctor's reporting frame.

A characteristic of the consultation was the paediatrician's juggling between the multiple schemas and social interaction frames:

> Just as ways of talking (that is, of expressing and establishing footing), at any point in interaction reflect the operation of multiple frames, similarly, what individuals choose to say in an interaction grows out of multiple knowledge schemas regarding the issues under discussion, the participants, the setting, and so on. (p.69)

The validity and usefulness of this study was seen in its description of the "exceedingly complex, indeed burdensome nature of the paediatrician's task in examining a child in the mother's presence" which was welcomed by the paediatrician as "a theoretical analysis of what she had instinctively sensed."

2.7.3. The complexity of the present study

The present study is attempting a similar endeavour, with similar usefulness, but with the addition of two further complicating conditions:

- Firstly, the assessment protocol is more complex because it includes multiprofessional as well as professional-parent interactions, educational as well as medical settings, a developmental assessment *and* a medical examination, and children with pervasive developmental difficulties rather than cerebral palsy.

- Secondly, the analysis aims to capture sequential and cognitive processes and assessment goal structures, as well as knowledge and negotiation frames. Consequently also, while Tannen & Wallat made use of discourse analysis only, the present study combines it with verbal protocol analysis.

Chapter 3

THE RESEARCH QUESTIONS

3.1. Research aims

This study had been conceived out of my experience that professionals from different disciplines and in different settings approach the assessment of children with disability in different ways and with different conclusions. The purpose of this study was thus to identify and describe how different frameworks are used by professionals in assessment, and how these impact on their decision-making process.

The literature review showed four types of frameworks that might influence professionals' decision making, namely procedural, knowledge, goal and negotiation frames (see Chapter 2). Thus the study was intended to seek evidence on the possible actual activation by professionals of instances of each of these four types of influential structures. The search was open to any other possible framework in operation, and to how the different frameworks were activated concurrently or in alternation.

3.2. Research focus

3.2.1. Professional practice in the field

The above purpose, first of all, determined the focus of this study, within which the research questions were developed. *This study is about professionals' decision-making processes in assessment of disability in real work settings.*

From its conception, this research has focused on practitioners' work in the field, on decision-making frameworks-in-action. This focus became more pronounced in view of the current research need for identifying and describing "everyday" processes in naturalistic assessment settings.

3.2.2. Process not outcome questions

Furthermore, the research is focused on decision-making *processes* rather than outcomes. The following reasons have already been explained in previous chapters:

- Firstly, assessment of disability is an ill-structured problem, and thus presents difficulties for any attempt to measure outcomes since there are no standard correct ways of assessing or solving the presenting problem.

- Secondly, it has been reported that professionals do not seem to use the same criteria for making decisions about children.

- Thirdly, recommendations for improvement of outcomes, such as families' understanding of their children and accession of services following multidisciplinary developmental assessment, have focused on the need for changes in the assessment process.

- And finally, it has been suggested that clients and professionals may see the assessment process as an end in itself, regarding it as a therapeutic process that enhances the coping process experienced by parents, carers and educators of children with disability.

For all these reasons, it is seen as worthwhile to try to understand how professionals, together with the parents, actually develop their formulations of the child's disability and reach their decisions on best ways of supporting the child, family and educators.

Such an endeavour also fits with the major aim of NDM research, which has been seeking to understand the process of "how people use their knowledge and experience to assess complex and uncertain conditions and take action" (Beach *et al.*, 1997, p.30). In contrast to traditional decision studies which emphasised development of prescribed rational choice methods, NDM has been seen as providing "knowledge to designers on what strategies are likely to be adopted in the real world, what problems actually face practitioners, and what training and cognitive supports would be desirable" (Xiao, Milgram & Doyle, 1997, p.197).

Thus, the current study was intended to contribute to our understanding of the decision-making *process* in the assessment of children with early childhood disability in naturalistic field settings.

3.3. Research questions

Within the above foci, the questions were formulated according to the different types of frameworks that have been identified within the naturalistic decision-making literature, mainly from cognitive psychology and sociology. These have been defined in the conceptual framework given in Chapter 2. This conceptualisation gave rise to three major HOW questions:

1. *How do procedural frameworks structure the way professionals actually organise and process their assessment of pre-school children with disability?*

    a) How do professionals from different disciplines and in different settings organise the assessment event?

    b) How are different processes applied?

2. *How are disciplinary knowledge and individual and institutional goal structures activated in the professionals' decision-making process, and with what consequences?*

   a) How are different types of knowledge structures activated in assessment by professionals from different disciplines?

   b) How is the assessment task construed by professionals from different disciplines and in different settings? Who is the client, and what is the assessment intended to achieve?

   c) How do these knowledge structures and assessment goals impact on the professionals' perception of, and recommendations about, similar forms of disability?

3. Given that the assessment of disability is an inherently social interaction process, *how are professionals' formulations of the problem and of possible remedial action negotiated and with what consequences?*

   a) How are inter-professional group dynamic negotiations involved in the formulation of the problem?

   b) How are professional-parent group dynamic negotiations involved in the formulation of a child's difficulties and plans for remedial action?

   c) How do the different negotiation frameworks impact on professionals' decision making?

The next two chapters describe the methodology through which the above questions were pursued.

Chapter 4

METHODOLOGY I:
A QUALITATIVE MULTIPLE-CASE STUDY DESIGN

4.1. Introduction

The methodology is presented in two chapters:

- This chapter presents the qualitative, multiple-case study design and its rationale for answering the research questions. An account is given of the sample chosen (four cases, two from a medical and two from an educational site), and of the data collected: naturalistic discussion protocols were recorded as the main database, and these were triangulated through semi-structured post-assessment interviews held with each participant.

- Chapter 5 then explains how two types of analysis were applied to the data. All discussion protocols were subjected to *verbal protocol analysis*. A coding frame was developed that included six task decision-making processes and three group processes, which were applied at the single-statement and episode levels of each protocol. These led to the derivation of the *procedural*, *knowledge* and *goal* structures of each assessment. The protocols were also subjected to *discourse and conversation analysis*. This analysis, in addition to the group process codes, led to the derivation of the *negotiation* structures within each assessment.

4.2. A qualitative multiple-case study design

4.2.1. Qualitative design

This study was intended to identify and describe the decision-making frameworks used by professionals in real field assessments of disability. A qualitative rather than quantitative approach was best suited for this naturalistic and exploratory purpose.

4.2.1.1. A naturalistic study

Naturalistic decision making focuses on "real people making real decisions in their everyday contexts" (Orasanu & Fischer, 1997, p.343). The research questions given in the previous chapter are characterised by the core features of naturalistic enquiry, namely the attempt to understand the complex contextualised interrelationships of the phenomenon, and the focus on the participants' own understanding and action:

- The researcher's role is to gain a "holistic" (systemic, encompassing, integrated) overview of the context under study: its arrangements, its explicit and implicit rules. .....
- A main task is to explicate the ways people in particular settings come to understand, account for, take action, and otherwise manage their day-to-day situations. (Miles & Huberman, 1994, p.7; cf. Maxwell, 1996)

4.2.1.2. An exploratory study

Another reason for the choice of a qualitative design was the exploratory nature of the study. It is aimed at *discovering* the occurrence of regularities (Tesch, 1990) in mainly unstructured data. The main database would be records of naturally occurring events, over which the researcher exercised no control. Secondly, though conceptualised within an existent decision-making

paradigm, the search for intertwined task and group dynamic decision-making frameworks presented a novel situation. Moreover, the approach was also being applied to the uncharted context of transdisciplinary assessment. It was intended that the patterns to be found in the data would be constructed mainly inductively, allowing for new "unanticipated" insights into the phenomenon (Maxwell, 1996). These aims could be met through a qualitative approach.

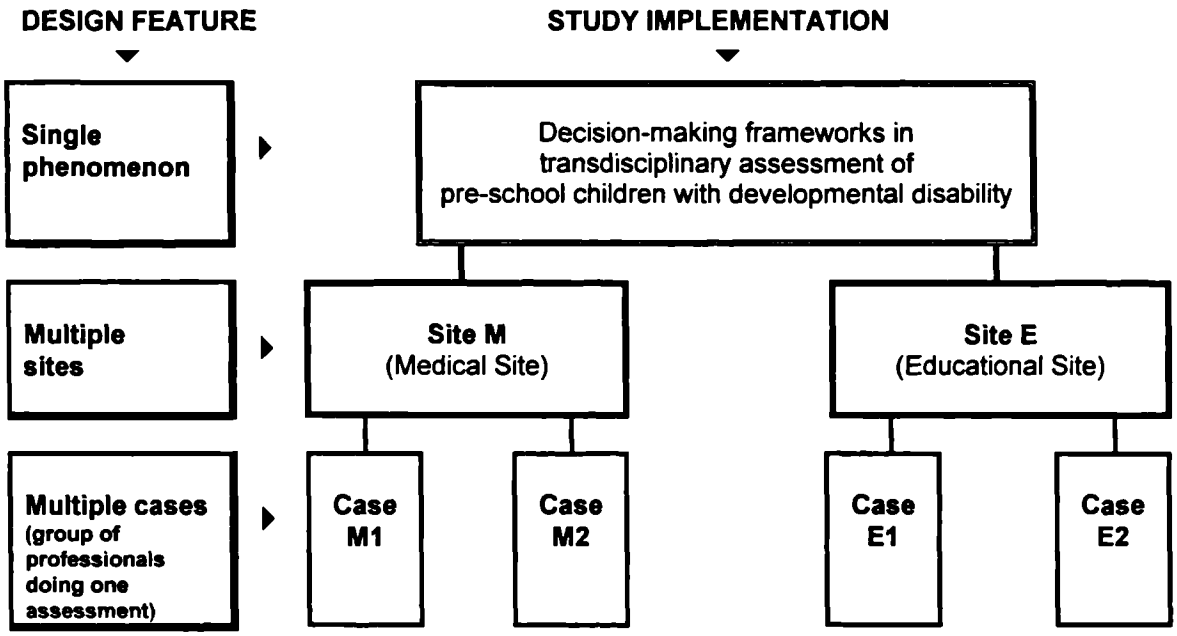
4.2.2. A case study

An important aspect of the qualitative design is the purpose of understanding the phenomenon within its real-life contexts which are believed to be highly relevant to the research questions. Indeed, the focus of the study would be on a few specific decision-making groups working within a bounded system of an agency (Stake, 1994). Moreover, a "how" question is being posed about events over which there was no research control. These are three central characteristics of case study research (Yin, 1994).

Thus a multiple-case, multi-site research design was adopted for the study (see Figure 4.2.2, below). In this study, the *case* is being bounded in the same way as that used by the participants themselves: it consists of the discussion protocols and other records about the *assessment of one child and family* from referral to plan of action (see Yin, 1994; Stake, 1994). Thus each assessment will be analysed independently as a separate case.

This helps to avoid confusion between practitioners' and research use of the term *case*. It must still be noted that the focus of this study is on the *professionals'* decision-making frameworks. Thus it is the *group of professionals* that constitute the case, rather than the clients (see Figure 4.2.2, below).

Figure 4.2.2: Multiple-case study design



4.2.3. Why multiple cases and sites?

One of the main issues in the design was the number of groups of professionals (or *cases* as understood within case study design) to be involved. It was decided to opt for a multiple-case design for three main reasons:

- Firstly, the study aims at describing a common rather than a rare phenomenon.

- Secondly, given the interest of the study in analytical generalisation (see next section), multiple cases will offer an opportunity for more effective exploration of issues through contrastive analysis (Srauss & Corbin, 1990). This is especially relevant to the present study since the literature suggested that two contrasting frameworks are applied to the assessment of disability, namely the medical and educational perspectives.

- Thirdly, the use of multiple cases is expected to reveal a more 'compelling' picture (Yin, 1994, pp.44-45) of decision making in disability.

Table 4.2.3 below presents the implications of three different choices, namely two extreme choices of 4 assessments X 1 site or 1 assessment X 4 sites, and the middle column choices of a mixture of a number of cases and of sites.

Table 4.2.3:
Implications of alternative combinations of cases* and sites

Different comparative situations relevant to the study	4 assessments X 1 site	2 assessments X 2 sites	1 assessment X 4 sites
Same individual professionals across assessments	*	*	
Similar professions across teams/assessments		*	*
Same team/setting across different assessments	*	*	
Similar assessment across different teams/settings		*	*

* A case stands for an assessment of one child and family

Because of interest in using the research for the development of theory (see below), the choice of the middle option (**2 assessments X 2 sites**) was seen as the most desirable. This option could provide some comparative data for the major phenomena of interest: how the same individual professionals approach assessment when presented with different children and families; how the same professions approach similar cases when employed by different agencies or

groups; how **groups** of professionals approach different children and families; how **different groups** of professionals based in different settings approach similar children and families.

4.3. Sampling strategy

The choice of Sites and cases had important implications for the type of results that could be achieved. A rationale is therefore given for the results aimed for and how the sample chosen was relevant to those aims.

4.3.1. Rationale

4.3.1.1. Analytic generalizability

The case study approach presents a challenge as to how far one can generalise the findings from a single or a few cases. Since this study did intend to reach conclusions that would be generalizable in some way to transdisciplinary assessment of early childhood disability, this issue was a major concern of the research. The obvious objection is that the few professionals and cases included in this study may have easily been exceptional in one way or another as individuals or groups, and that the findings may thus be seen as applicable to these cases only.

In order to counteract the above difficulty, one might try to show that these professionals and cases were in fact typical of others in the field. However, such an approach is based on an incorrect application of the concept of representativeness to case study. In case study, the findings are not generalised to a population: this study does not aim to state that the frameworks found to be used by the professionals in the research are probably the ones used in other

similar groups. Rather the findings will be generalised to theory (Yin, 1994, p.36): the problems that these professionals address and the way they address them point to the issues that are important to our conceptualisation of what professionals are doing and how they do assessments.

Yin (1994) contrasts this *analytic* generalizability of case studies to the *statistical* generalizability of quantitative research. The *case* is comparable to an experiment rather than to one subject in the experiment. Thus even a single case can be generalised to theory. Yin gives the following example: Jacobs' (1961) study about a single city, in fact led to the building of a theory of urban planning by covering broader theoretical issues, such as the role of kerbs, neighbourhood parks, the processes of slumming and unslumming etc. Similarly within problem-solving research, the aim has been that of "uncovering generalizable aspects of cognitive processes" (Payne *et al.*, 1993) through the study of single or a few cases.

Of course, the replication of the same phenomenon in the study of other cases, as in the replication of an experiment, makes a particular analytic generalisation much more compelling (Yin, 1994). And the gradual accumulation of cases in which similar or contrasting findings are predicted (literal or theoretical replication), is a process one looks forward to in research undertaken through case studies.

4.3.1.2. Describing possibilities

However, even without such an accumulation, the theoretical value of the findings of a case study need not rely on any reasoning about the typicality of the case to other cases in the same field. Within conversation analytic research, which is often based on single case studies, the concept of *possibility* - "social practices that are possible" - has been proposed as a criterion of generalizability:

> The possibility of various practices can be considered generalizable even if the practices are not actualised in similar ways across different settings. (Perakyla, 1997, p.215)

Perakyla gave as an example his own findings about AIDS counselling techniques which had been developed by, and were thus restricted to, a particular London teaching hospital. Even though his results could not be directly generalizable to any other site where AIDS counselling was undertaken,

> The study involves an effort to describe in detail how these questioning techniques were made possible: what kind of management of turn-taking, participation frameworks, turn design, sequence organisation, and so on, was needed in order for the participants to set up scenes where 'circular questioning', 'live open supervision' and 'hypothetical future-oriented questioning' were done. The study showed *how* these practices are made possible through the very details of the participants' action. .....
> They were generalizable as descriptions of what any counsellor or other professional, with his or her clients, *can* do, given that he or she has the same array of interactional competencies as the participants of the AIDS counselling sessions have. (Perakyla, 1997, p.215-6, author's italics; cf. Patel & Groen, 1993)

However, it should be noted that the use of case study for analytic generalisation has been regarded with caution within case study research itself. Thus a distinction has been made between *intrinsic* and *instrumental* use of case studies (Stake, 1994):

- the *intrinsic* case study is undertaken "because one wants better understanding of this particular case";

- in *instrumental* case studies, "a particular case is examined to provide insight into an issue or refinement of theory. The case is of secondary interest; it plays a supportive role, facilitating our understanding of something else" (Stake, 1994, p.237).

While these two approaches to case study are in fact seen as lying on a continuum, Stake suggested that "Generalisations from differences between any

two cases are much less to be trusted than generalisations from one" because the researcher may be drawn away from "thick" description so that "uniqueness and complexities [of the case] are glossed over" (p.242). He also reports that the bulk of case study work is done by people who have *intrinsic* interests in the cases:

> Their intrinsic case study designs draw the researcher toward understanding what is important about that case within its own world, not so much the world of researchers and theorists, but developing its issues, contexts, and interpretations. (p.242)

The present research has been conceptualised as an instrumental case study. However, the above caution is heeded: each case will be initially analysed independently, with common and contrasting issues being brought up as a second step. This enables the research to focus on some important phenomena that may occur in the particular context of only one case, but which may illustrate *possible* structures in professionals' frameworks-in-action that merit intrinsic thick description.

4.3.2. Purposive sampling

4.3.2.1. Getting to know the field

As an instrumental case study, this research had to address the issue of selecting sites and cases. *Purposive* or *theoretical* sampling was used as opposed to the random sampling of quantitative studies. The sample is not primarily chosen because it is typical, but because it provides insights into particular issues of the phenomenon:

> The researcher examines various interests in the phenomenon, selecting a case of some typicality, but leaning toward those cases that seem to offer *opportunity to learn*. ..... Often it is better to learn a lot from an atypical case than a little from a magnificently typical case. (Stake, 1994, p.243, author's italics)

Thus, having adopted the focus on multiprofessional decision making in assessment of pre-school children with developmental disability, my first steps were to review current theoretical concerns in the area, and also to become familiar with actual multiprofessional assessment practices in my home country (Malta) and in London.

4.3.2.2.Theoretical issues

With regards to theoretical issues, Table 4.3.2.2, below shows a list of features, categorised as settings, actors, events, and processes that were derived from the literature. Eight features were considered essential to meet the aims of the study and were used as the criteria in case selection. Each case must:

1. *Involve the assessment of cases of early childhood disability whose investigation had not yet been fully resolved previous to the assessment being studied.* This ensures that the assessment process data to be collected substantially addresses main issues like diagnosis, prognosis, and recommendations about the child's disability, rather than merely recognising previous decisions.

2. *Involve the assessment of complex cases.* This ensures a wider verbalised discussion of issues that provides evidence of professionals' activation of relevant decision-making frameworks (cf. Leithwood, Steinbach & Raun, 1993). It was decided that cases that were suspected to lie within the autistic spectrum would fit this requirement (see e.g. Wakschlag & Leventhal, 1996; Wing, 1996).

3. *Involve the participation of multidisciplinary groups, with professionals from at least the medical and psychological fields.* Such participation had to include the explicit sharing of opinions on the nature of the child's difficulties and relevant decisions about proposed solutions.

4. *Include experienced professionals with a high commitment to provide a quality service to clients.* This was required because the study was intended to identify and describe phenomena that occurred when practitioners were actively seeking to meet the demands of current understandings of high quality service.

Table 4.3.2.2:
Initial sampling options in a study of multiprofessional decision making in disability (see Robson, 1994, p.156)

Sampling parameter	*Possible choices*
settings	hospitals (general or specialised), schools (ordinary or special), special centres or units (e.g. child development centres), NGOs serving children with disability, private clinics
actors	variety of professionals working in large/small, fixed/flexible teams: medical, paramedical, psychological, social & educational; variety of clients: children with various forms of special needs, parents of different backgrounds
events	multiprofessional assessments, team meetings, team meetings with parents
processes	problem solving and decision making: gathering, reporting/sharing information with professional colleagues; hypothesis testing, formulating the problem, discussing alternative explanations, prognoses and remedial actions; reporting/sharing information, decisions on recommendations with parents

5. *Include at least one site each from a medical setting and an educational setting.* This was essential to ensure evidence on the possible impact of institutional frameworks.

6. *At some point in the assessment, include a discussion with the parents.* Parental participation was required both because of the assumed impact on frameworks used in the formulation of decisions about the child, as well as because of the current understanding that best practices had to include parent participation (Bruder, 1993; Dale, 1995).

7. *Include substantial democratic discussion among participants in the problem-solving and decision-making process.* This was necessary to ensure registration of a variety of views.

8. *Allow for the possibility of at least audio-recording of all the discussions in the assessment, and the interviewing of each participant in the assessment.* Video recording had been planned but had to be given up due to access difficulties.

4.3.2.3. Current multiprofessional practice

A number of teams in the UK, indeed in London, met the above criteria: Child Development Teams and specialist paediatric centres, and multidisciplinary assessment meetings in educational settings. In Malta, one NGO organisation for children with mental disability (the EDEN Foundation) held regular multidisciplinary assessments and reviews on each child in the service.

The Malta situation was already familiar to me, since I had worked as an educational psychologist in the Malta Education Department and had been one of two psychologists at the EDEN Foundation. In addition I visited a number of sites in London in the initial phase of the research. These included two tertiary

medical sites based in hospitals, and two educational sites based in schools. Observations of two full assessments at one medical site and one educational site were undertaken and interviews were held with key persons at each site. Interviews were also held with the director of an NGO site which networked multidisciplinary services for parents, with the director of a specialist centre for assessment of persons with social and communication disorders, and with the Specialist Health Visitor of a Child Development Centre. in London. Moreover a pilot recording was carried out of two multidisciplinary assessments, one at the EDEN Foundation in Malta, and one at an educational site in London, both including interviews with participants.

These sites included a wide variety of professionals, of group organisation, and of assessment procedures.

4.3.2.4. Sites selected

Given the purpose of the research, the selection of sites for the study was based on the need for data that were expected to provide most evidence on a variety of professional perspectives and institutional settings. Thus, it was decided that the two sites selected would:

- firstly, include one medical site and one educational site that ensured evidence on the two major relevant settings; and

- secondly, involve a transdisciplinary assessment procedure. This procedure entailed the assessment of the child by all the professionals simultaneously together with the parents over half a day, and thus provided the best opportunity for explicit opinions of the child and family.

This excluded the possibility of including a case from Malta because no relevant site made use of the transdisciplinary assessment procedure. Moreover, though cross culture evidence was seen as an enrichment to the

potential findings of the study, the project would be able to handle assessments bounded by one culture more effectively. However, all the above theoretical issues were to be included. Thus the two chosen sites were:

- **Site M:** a multidisciplinary team (paediatric senior registrar, psychologist, and speech therapist) working at a tertiary neurodisability centre attached to a hospital; and

- **Site E:** an interagency multidisciplinary group, chaired by an educational psychologist and meeting within a school, undertaking Stage 3 Code of Practice assessments.

These sites were typically involved in one-off assessments over one morning session. They lacked data on what are currently regarded as important features of assessments, namely the way assessments occur over weeks rather than hours, and the way the assessments were linked to ongoing intervention. But for the purposes of the research question, these transdisciplinary assessments constituted bounded events that could be handled by the project, while at the same time meeting the requirements for the database to:

- consist of ecological events;
- include the influence of a variety of frameworks in decision making on disability;
- include important relevant disciplines and institutional settings;
- include the social interaction influence of inter-professional and professional-parent group dynamics.

4.3.2.5. Cases selected

At both sites it was possible to select cases that were *complex*, and that involved children whose referral problem was suspected to lie within the autistic spectrum.

The two cases chosen from each site, through planning and opportunity, offered the varied situations arising from *different child conditions*: one child who was in fact diagnosed as having difficulties within the autistic spectrum, and one child whose difficulties were diagnosed as not primarily caused by autism (details of the children are given in the next chapter, see Table 6.2.5b).

Since this study focused on professional representations rather than the study of the disabling conditions within the children themselves, the children's *gender* and *social background* were not regarded as a main feature of the study. In fact three of the children were female and one male. The research was, however, enriched by the inclusion of a variety of social backgrounds and client (child, parent and educators) personalities. Both parents attended each assessment.

It was also intended to have the *same professionals* involved in the two cases at each site. This was achieved at Site M, but only partly at Site E as will be described later.

4.4. Actual data collected

How can one capture the frameworks used by professionals in decision-making action?

4.4.1. Assessment discussion protocols

The attempt to trace the "sequence of information flow and knowledge activation" in problem-solving and decision-making research has relied on two main types of data (see Woods, 1993):

(1) *verbal protocols:* these can take the form of either concurrent think-aloud protocols produced by the problem solver as he or she engages in the task; or retrospective verbal reports, where the participants are asked to provide a commentary about what they were doing at various points, possibly cued by a replay of their actual behaviour (Ericcson & Simon, 1993).

(2) *behaviour protocols*: this may consist of a record of direct observation of participant behaviour, or traces of data acquisition sequences (see Ford *et al.*, 1989; Jordan & Henderson, 1995).

Asking the professionals to think-aloud during assessment activity with the child was given up as it would have interfered with the natural process. However, transdisciplinary assessment entails the verbalisation of the *group level* decision-making process: the verbal protocol could constitute the main database of the study. This was in fact superior to techniques that manipulated an individual task into a co-operative one to generate the protocol (Woods, 1993). Though the relation between individual and group level processes is still a moot point (Zsambok, 1997), the discussion protocols provided substantial naturalistic evidence of the "group level intellective phenomena" (Larson & Christensen, 1993), tracing the records on the "common blackboard that everyone is reading from, containing knowledge of the task, the mission, and the situation, and ... the knowledge of interaction between oneself and other team members that is relevant to team tasks" (Zsambok, 1993, p.113). Elicitation of verbal protocols through interactive decision making has been effectively used even in laboratory studies, as in a dialogue between couples asked to choose a home (Svenson, 1989).

4.4.2. Documents and post-assessment interviews

However, given that the assessment was an ill-structured task, it was expected that the discussion protocols would leave many gaps in the evidence about the decision-making process. Therefore the discussion protocols had to be supplemented by:

- assessment documentation - referral and post-assessment letters and reports;

- post-assessment semi-structured interviews with each participant, including the parents, within one week after the assessment. These were intended to allow the professionals and parents to elaborate their opinions about the child and family, and also to provide explicit participant descriptions of the frameworks used in their decisions.

A summary of the database obtained for each case is given in Table 4.4.2 below.

Table 4.4.2a: Summary of verbal protocol database on each of the four cases (collected between October 1993 and March 1997)

CASE / DATA	M.1 (11.95)	M.2 (12.95)	E.1 (11.95)	E.2 (01.97)
1. Policy Interv. with Site dir.	C1 (11.93) + Service specification manuscript		E1 (12.93) +Service specification manuscript	
2. Referral reports	Paed.'s letter; Sp. ther. rept.	Paed.'s letter; Sp.ther. report		E3's Stage 3 report
3. Post-assessment reports	Brief asst. rept.; Full asst. rept.; P's letter to local paed.	Brief asst. rept.; Full asst. rept.; P's letter to local paed.;	Secretary's asst. minutes; E2's Stage 4 rept.	Secretary's asst. minutes.
4. Protocols: **a.1**	Referral meeting (all centre staff)	Referral meeting (all centre staff)	Referral meeting (E1, E2, Y, S2, O, T, A, H)	Referral meeting (E1, E3, E4, Y, T, A, C2)
a.2	Referral meeting (C1, S1, P)			
b	Initial parent interview (C1, S1, P, M&F)	Initial parent interview (C1, S1, P, M&F)	*[M already met E2, S2, H & T]*	*[M&F already met E3, C2, T]*
c		Planning asst. activities	Planning asst. activities	Planning asst. activities
d.1	*Assessment: (C1, S1, & P, & M&F with child) No recorded discussion*	*Assessment: (C1, S1, P, & M&F with child) No recorded discussion*	Observation 1 commentary *(M&F + T play with child: others observe)*	Observation 1 commentary *(M&F+ T play with child &sib: others observe)*
d.2	Professionals-only discussion (C1, S1, & P)	Professionals-only discussion (C1, S1, & P)	Professionals-only discussion (E1, E2, Y, S2, O, T, A, H)	Professionals-only discussion (E1, E3, E4, Y, T, A, C2)
d.3			*Observation 2 No comments (S2, T, & M with child: others observe; Y left after 10")*	Observation 2 commentary *(E3 & T with child: others observe)*
e	Parent conference : (C1, S1, P & M&F)	Parent conference (C1, S1, P & M&F)	Parent conference (E1, E2, S2, O, T, A, H & M&F - Y absent)	Parent conference (E3, E4, Y, T, A, C2 & M&F - E1 absent; Y left after 10")
f	Post-asst. Reflections (C1 & S1)	Post-asst. Reflections (P & S1)		
5. Post-assessment Interviews	F (12.95)	M&F (12.95)	M&F (11.95)	M&F (17.01.97)
	C1 (11.95)	C1 (12.95)	E1 (11.95)	E1 (01.97)
	P (11.95)	P (12.95)	E2 (12.95)	E3 (01.97)
	S1 (11.95)	S1 (12.95)	Y (12 95)	Y (01.97)
			A (12.95)	A (01.97)
			T (12.95)	T (01.97)
			S (12.95)	C2 (01.97)
			H (12.95)	

Site M professionals: C1 = Clinical psychologist; S1 = Speech therapist; P = Paediatric senior registrar.
Site E professionals: A = Advisor (deputy head of special school); C2 = Clinical psychologist; E1/2/3/4 = Educational Psychologists; H = Head of school; O = Occupational therapist; S2 = Speech therapist; T = Teacher; Y = Psychotherapist.
Parents: F = Father; M = Mother.

Table 4.4.2b:
Type of professionals involved by case

CASES / DISCIPLINE	M1	M2	E1	E2	Total cases assessed by same professional	Total participation by each profession
Medical:						
Paediatrician	P1	P1			2	2
Paramedical						
Speech therapist	S1	S1			2	
			S2		1	3
Occup. Therapist			O*		1	1
Psychological:						
Clinical	C1	C1			2	
				C2	1	3
Educational			E1	E1	2	
			E2		1	
				E3	1	
				E4*	1	5
Psychotherapy			Y	Y	2	2
Educational						
SEN Advisor			A1	A1	2	2
Teacher			T1		1	
				T2	1	2
Head teacher			H		1	1
Total professionals	3	3	7	7		

*E4 and O were not available for interview within the two weeks after the assessment

The type of professionals involved differed from the original plan (see Table 4.4.2b, above). Thus at Site M, the medical person was a paediatric senior registrar who was in training as paediatrician with a senior clinical psychologist and a chief speech therapist. Educational psychologists were more than doubly represented at Site E, while medical personnel were absent, and the speech therapist did not attend SiteE.2. Frameworks used by professionals from the same discipline at different sites would have highlighted setting influences. On the other hand, the total absence of medical personnel at Site E highlighted the contrast between the two sites.

The theoretical purpose of the study was met because at least the same one member from each of the four relevant disciplines - medical, paramedical,

psychological and educational - participated in the two assessments at each site: P, C1, & S1 at Site M; and A, E1, & Y at Site E (see Table 4.4.2b, above).

4.5. The interview schedule

4.5.1. Rationale for semi-structured interview

As already mentioned, post-assessment interviews with each participant in the assessments was necessary for the professionals and parents to elaborate their opinions about the child and family, and also to provide explicit explanations of the frameworks used in their decisions. This need was clear from pilot work which showed that:

- Firstly, group discussion protocols leave a number of gaps in each individual's (including the parents) externalisation of his or her problem solving processes, both because of lack of space as well as because of shared assumptions that might still be important to understand the frameworks being used in the decision-making process.

- Secondly, there was rarely complete consensus in group decisions. Yet views that differed from the more dominant views might be expressed minimally or not at all.

- Thirdly, group discussion may not provide enough space for rational inferential processing for decisions taken or options refused, especially where they are part of an established routine, such as why psychometric data was sought or not sought in the first place.

The post-assessment interviews thus had five objectives:

(1) They allow each participant to express individual opinions that were less constrained by the assessment context (see Voss *et al.*, 1983);

(2) They provide an opportunity for team members to reveal some of their 'covert' (socio-political) concerns for their own well being in the group and for the interests of the group as a whole and its institutional context, as well as for the well-being of the child and family;

(3) They provide an opportunity to participants to justify their decision-making procedures, conclusions and decisions and their relation to higher value systems. This would be elicited especially through "Why?" questions for each decisional behaviour.

(4) They enable comparison of decision-making action protocols with the interview protocols, between theories-in-use that are implicit in the actual decision-making process and espoused theories (goals, assumptions and values claimed to guide the professionals' decisions).

(5) Finally, the interviews serve a validating function through triangulation of data sources: independent views of each participant on the common experience of the assessment.

4.5.2. Developing the interview schedule

4.5.2.1. Main elements in the schedule

The semi-structured interview schedule was constructed on the basis of the two main sources reviewed in the previous chapters:

- Models of the group problem solving and decision-making process (see Carroll & Johnson, 1990; Larson & Christensen, 1993); and

- Models of the process of disability assessment.

The main elements to be included were (see copy of interview schedules in Appendix 2):

1. *How the problem was identified*: who referred it and why, how was the respondent involved and why, who was the client and why;

2. *How the problem was conceptualised*: were any initial hypotheses entertained and why, what information was sought and why, what information was acquired, what previous knowledge was brought to bear on the professional's search, and why;

3. *How decisions about diagnosis, prognosis, and recommendations were formulated,* and why so;

4. *How the inter-professional and professional-parent dynamics influenced the assessment*, and why.

These issues were to be raised through a semi-structured schedule that allowed for the expression of the respondent's own formulation of the event (see below).

4.5.2.2. Two characteristic features: 'Why?' questions and chronological review

Two important features characterised the interviews.

- Firstly, an important part of the interview is the asking of **'Why?'** questions regarding all elements in the decision-making process. This is necessary to elicit participants' explicit frameworks in their search for information, method

used to acquire it, and use made of it. Thus in the first pilot case, where few why questions were asked, little direct inferencing about the actions taken by individuals had been obtained.

- It is also important that, while trying to frame the data within developed decision-making models, questioning should allow for the expression of the particular concerns of respondents whose approach may somehow depart from those models. These two aims are achieved by taking the respondent through the actual sequence of the assessment, allowing for the respondent's elaboration. A temporal order is also expected to aid accurate recall (Carroll & Johnson, 1990).

4.5.2.3. Two phases of the interview

Two separate phases were planned for the interview schedule to reflect (1) the task, and (2) social interaction dimensions (see Appendix 2). Following the pilot experience, it was decided to start with the information processing aspects. In the pilot, starting with the question 'How did you feel about the conference?' had led the psychologist and speech therapist to focus immediately on the conflicts in the assessment, and the social interaction aspects thus overshadowed the information processing aspects. Though a similar effect may in fact take place during the assessment, it was felt that the interview should not focus the interviewees in a different way than is prescribed for the assessment. If the 'political' dimension in an actual assessment takes precedence, it will still result when given the opportunity in the second phase of the interview.

4.5.3. Administering the semi-structured interview

In administering the interview, an important consideration relevant to the study was how far to focus the respondents on prepared theoretical issues, and how

far to allow them to raise their own concerns. Two main interview styles - 'respondent' and 'informant' interviewing - have been distinguished on the basis of 'where lies the locus of control for what happens throughout the interviewing process' (Powney & Watts, 1987, p.17; cf. Robson, 1994).

In *respondent interviewing*, the researcher has a set of questions that must be answered, though this can be done through a tight or loose structure:

> A tightly structured interview commonly refers to that type of interview which follows a fairly clear and well-maintained schedule, or pre-organised plan. A loosely structured interview, on the other hand, implies a general set of ideas to which the interviewer would like some responses at some point in the session, though the order and exact wording are not important. (pp.17-18)

In *informant interviewing*, again the interview may be tightly or loosely structured, but it is the interviewee who directs it. The goal is to gain insight into the perceptions of a particular person or persons within a situation.

> The interviewer is attempting to help the interviewee express his or her *own* concerns and interests without feeling unduly hampered. Such an interview is seen as an invitation to a person to explore certain issues, to impose their *own* structure on the session, in collaboration with an interviewer. (Powney & Watts, 1987, p.18)

Though the present purpose of exploring, understanding and describing what is going on at the case conference through qualitative research, seems to fit best with informant interviewing, respondent interviewing was adopted for two reasons:

a) The main factual data were the assessment protocols which were not influenced by the researcher. Thus pre-conference interviews and thinking-aloud protocols during the assessment were initially considered but abandoned in the attempt to maintain as much as possible the ecological validity of the study. Therefore, researcher led post-assessment interviews could still be balanced by the purely participant led assessment discussions.

b) Moreover, the present study is not intended to pick up whatever concerns professionals might have in transdisciplinary settings. It is concerned about a particular set of issues, namely the frameworks used in problem solving and decision making, all major aspects of which must be covered at some point by the interview protocols.

To some extent, therefore, the interviews impose the author's view that decision making regarding the impact of disability is a major phenomenon in which professionals engage in assessment of disability. At the same time, however, the study sought to find out the respondents' *own* perceptions of the problems and ways of dealing with them. The balance is a challenge of which the author was aware, but which can never be really resolved completely, since the interview is

> The joint product of the questions as perceived by the informants and the social situational circumstances within which the questions were put to them. (Brenner, 1985, p.154; cf. Holstein & Gubrium, 1997)

For instance, in the pilot post-conference interview with the speech therapist, my assumption in favour of parents' presence at the case conference could easily be detected in the questions.

So the formulation of interview questions had to avoid biasing the account process and seek as much as possible to allow the respondent to report within his/her frame of reference (Brenner, 1985). This is achieved by adopting a neutral stance - never entering an argumentative interaction - and adopting a non-directive interactive style. This applies to main questions: e.g. "Have you formulated any diagnosis for this case?" rather than "You haven't diagnosed him/her as autistic yet, have you?" And to probing: "You are saying that you have decided that he should attend a special school" rather than "Looks like you're on the right track."

Moreover, to allow more control from the interviewee's side, the interview was loosely structured through a few main questions accompanied by probes (see Brenner, 1985): e.g.

Question: Can you tell me how the case was referred to you and what were your initial questions and investigations?

Probes: Were you given any pre-assessment information?
Did you have any initial hunches?
Did you meet the clients/child and parents before?
What assessments did you undertake? Why?

4.6. Access

It is important to note that the kind of field research involved in this study presents a big challenge with regards to gaining access to relevant ecological practice. Access goes much further than the formality of obtaining the go-ahead for my proposal from an ethics committee at the site - which was in fact a requirement at Site M. The study was aimed at describing the professionals' work: though assured that confidentiality would be respected and anonymity preserved, and that the study was descriptive, potential evaluative results are seen as very threatening by the professionals, especially as it was to be externally controlled. Medical personnel both in Malta and in London were especially wary of personal evaluation.

Initial access to the centres was obtained through the support of my highly regarded supervisors, Professor Klaus Wedell and Dr Ingrid Lunt. Once I met the managers of the services, it was essential that my behaviour should develop a sense of trustworthiness. This would be conveyed through signalling absolute respect for confidentiality, an unconditional positive regard to their practice, as well as a genuine interest in the positive features of the service.

Such an attempt was easier in this case because it was aimed at searching for exemplars of good practice. These features were also conveyed in written form through the research invitation leaflet (see Appendix 1). It also seemed easier to develop a sense of genuineness and authenticity between researcher and participants because the researcher was involved in similar multidisciplinary work as an educational psychologist. Even so, however, one medical centre refused to participate. I also had to give up my initial suggestion that discussions would be videotaped.

Access to the two sites included in the study was in fact most successful because the heads of the respective teams of professionals were not only enthusiastically dedicated to their work, but also interested in a continuing improvement of their practice and looking forward to useful feedback. They also understood my withholding of any feedback until all the data was collected and my analysis had reached an advanced stage. In fact trustworthy behaviour had to be maintained over time as my first interview of the managers occurred in Autumn 1993, while the recording of the assessment data started in Autumn 1995 and was completed in September 1996 (Site M) and March 1997 (Site E).

4.7. Ethics

Establishing mutual respect and confidence was not only necessary for gaining access. They were the basis of ethical conduct. As a practising educational psychologist, I had been trained in and exercised ethical conduct in relating to clients and colleagues. Research presents also some different professional issues especially due to the nature of "using" others for a purpose outside their personal request or interest, as well as the entailed public reporting of findings. Ethical issues were not solved by having my proposal vetted by the ethics committee of the medical site. I had obligations towards each of the

participants in the research. The major ethical principle in both professional and case study research appears to be similar: **being empathic**, in the sense of attending to actor intentionality and seeking to understand the actor's frames of reference and value commitments (Stake, 1995). This was illustrated in one discussion that resulted during the research with one of the professional participants concerned in her divulging personal views on other participants: she herself was ethical in being concerned about a particular conduct of a colleague while at the same time taking into consideration the whole context of the situation.

Still it was necessary to ask: Can this research carry harmful consequences to participants. First of all, would it in some way reduce the service that was being offered to clients? This was lessened by the non-intrusive approach adopted: no intervention was intended from the side of the researcher who was just observing and recording the events. The interview could however be potentially harmful to future relations between professionals and clients as well as to inter-professional relations.

These were lessened as much as possible both by the attempt to be as empathic as possible, i.e. to allow participants' own concerns and foci to surface with as little researcher bias as possible. As far as possible, also, time and place constraints of the professionals and parents were respected with accommodation being made by the researcher. Secondly confidentiality was strictly adhered to within the system that was being studied. Thirdly, as much as possible, attention was given not only to ensuring anonymity in reporting, but also in reducing the identifiability of persons and services in reporting. The distance of time from research collection to reporting in this case is also beneficial.

However, one cannot remove completely the possibility of identification by readers of published papers by those close to participants. It is therefore even more important to ensure participants' consent to the research. Written consent was in fact part of the procedure at the Medical site and oral consent

was obtained at the educational site. Each participant was also given the freedom of participation at any stage and level of the research: This was given explicitly in writing in the relevant leaflet describing the research (see Appendix 1) as well as orally to each participant. Ideally, it was intended to present feedback on findings to the groups participating in the research as a group: however, this became impracticable because group membership changed before the completion of the research.

4.8. Conclusion

The aim of this study was to identify and describe frameworks used by professionals in decision-making action in assessment of disability in complex field settings. These aims could be achieved through a qualitative, exploratory, multi-site and multi-case study design.

Two different Sites, with two cases in each, were purposely chosen to reflect the two main institutional settings for assessment of disability: a medical site (being a tertiary neurodisability centre attached to a hospital) and an educational site (being the Stage 3 Code of Practice multidisciplinary assessment of pre-school children held in a school). The particular sites were chosen because each made use of the transdisciplinary procedure whereby professionals carried out the assessment of the child simultaneously together with the parents over half a day, so that naturally occurring assessment protocols were available for analysis. To ensure an appropriately wide database, the actual assessments chosen were those of pre-school children whose difficulties were suspected to lie within the autistic spectrum.

Post-assessment interviews with each participant provided an elaboration and triangulation of evidence on the assessment process.

This approach required particular attention to access and ethical issues.

Chapter 5

METHODOLOGY II:
TWO QUALITATIVE METHODS OF ANALYSIS

5.1. Introduction

The main database consisted of the discussion protocols of each case with interview data for elaboration and triangulation. Two types of analysis were used.

- All discussion protocols were subjected to *verbal protocol analysis*. A coding frame was developed that included six *task* decision-making processes and three *group* negotiation processes. These were applied at three levels of analysis: single-statement, SUBgoal and MAIN goal levels of each protocol. This led to the derivation of the procedural structures, and the knowledge and goal structures of each assessment.

- The protocols were also subjected to *discourse and conversation analysis*. This analysis, in addition to the group process codes, led to the derivation of the negotiation structures within each assessment.

5.2. Aims of the analysis

The analysis was intended to look for patterns in the data, capturing evidence on how the procedural and other frameworks were activated by professionals, namely how they:

- processed the assessment: the implicit *procedural* script applied by the professionals in the discussion protocols;

- reasoned out the problem: the *knowledge* frames within which the nature of the problem was formulated and relevant decisions made;

- construed the nature of their task: the *goal* structures within which they gave meaning to what they were trying to achieve;

- responded to the inter-professional and professional-parent dynamics: the *negotiation* structures that were used in their decision making.

This could be achieved through the application of two different qualitative methodologies (see Richardson, 1996; cf. Riehl, 1998):

(1) verbal protocol analysis for ill-structured problems, and
(2) discourse, especially conversation, analysis.

5.3. Verbal protocol analysis for ill-structured problems

5.3.1. Model driven search for procedural and knowledge structures

Verbal protocol analysis was intended to "describe the sequence of information flow and knowledge activation" (Woods, 1993, p.234), that is the *procedural* and *knowledge* structures (see Chapter 2).

As is often noted by researchers using naturalistic data, "The protocol contents do not 'jump out' at the analyser, clearly indicating the structure and content organisation," and therefore the analysis "must be model driven" (Voss, 1988, p.77-78). Thus, a main task in this study was to choose a model through which

to structure (i.e. segment and code) the data. This had to be relevant to the research questions while at the same time allowing for data-driven patterns to emerge.

This involved a search for models used in problem solving and decision-making research and trying them out on the data until it was felt that the structure and contents were successfully captured. This was thus a long iterative process between models and data evidence. Here only the final model that was applied will be explained.

5.3.2. Two bases for structuring the data: process and content

The model that was adopted was based on the information processing paradigm used in problem solving and in naturalistic decision-making research. This research has mainly attempted to develop theory on the basis of differences between expert and novice problem solving (see reviews in Christensen & Elstein, 1991; Ericcson & Simon, 1993; Woods, 1993): in this study the comparison was between experts from different disciplines and settings.

Within this paradigm, the search for comparative patterns in the data has made use of two distinct bases for characterising the segmenting and coding of protocols:

- either through a search for structures of the *content* - "information heeded," looking for different patterns of chunking or stagewise activation;
- or through a search for "high-level, and more or less task independent" *cognitive processes,* looking for frequency or cyclical applications of the processes in the protocol (see Ericcson & Simon, 1993, Ch. 4).

Various terms may be used for content and process, such as "concepts and operations" (Green & Gilhooly, 1996, p.60); "operator" is a classical term for a problem-solving procedure (Newel & Simon, 1972).

Verbal protocol analysis, which has generally been aimed at producing computer models (Ericcson & Simon, 1993), has included an attempt to capture both the knowledge structures activated by the problem solver, as well as the procedures for accessing and using that knowledge. In this study on decision-making frameworks, both are of interest as ways in which decision-making action was framed by procedural and knowledge structures.

5.3.3. Content and process in the discussion protocols

5.3.3.1. Content structures

Two types of content were found in these assessments (see Table 5.3.3.1, below): *child* or *context* characteristics. Because most of the content concerned child features, five types were distinguished (1-2i-iv), while context features were kept as one block (3). The child features had particular relevance to children with difficulties suspected to lie within the autistic spectrum: [***m***] child's medical condition, [***f***] non-verbal levels of functioning, [***l***] language and communication skills, [***s***] social interaction skills, and [***b***] other characteristic behaviours which include especially unusual interests and stereotypic behaviours.

Table 5.3.3.1:
Types of *content* of assessment activity

CHILD	CONTEXT
1. [*m*] Child's physical [medical] condition; 2. *Child's behavioural characteristics**: 2.i. [*f*] Child's non-verbal and general functioning; 2.ii. [*l*] Language and communication; 2.iii. [*s*] Social interaction; 2.iv. [*b*] Child interests and other characteristic behaviours;	3. [*c*] Child's context (family and community services).

*These four subdivisions of the child's behavioural characteristics are particularly relevant to children like those involved in this research whose difficulties are suspected to lie within the autistic spectrum.

5.3.3.2. Processes

Several simple processes

In the initial attempts at analysis, a large number of problem solving processes that were applied to the above content, were explored (see Table 5.3.3.2, below). All of these processes were the subject of the present study. However, it was found that they could all be more effectively captured by a smaller number of higher level processes that had been developed in research on naturalistic decision making.

Nine intertwined TASK & GROUP processes

First of all, as the data of this study is about *group* decision making, two intertwined but distinguishable processes had to be captured: (a) TASK processes made up of the professionals' actions in understanding and recommending ways of managing the problem; and (b) GROUP processes

made up of actions aimed at managing the relations within the group - among the professionals and between the professionals and parents. The model adopted distinguished six high-level TASK processes (cf. Rouse & Morris, 1986; Patel & Arocha, 1995; Endsley, 1997), three GROUP processes (cf. McGrath, 1991; Rugs & Kaplan, 1993), and two overall QUALIFYING contents (cf. Voss, 1988).

Table 5.3.3.2:
Simple reasoning processes engaged in by professionals in assessment

- *searching for* and *eliciting* information on referral concerns of parents and other support services;
- *checking* the reliability of this information;
- *hypothesising* about the possible causes of the difficulties;
- *observing* the child and parent behaviours and
- *interpreting* the meaning of those behaviours;
- *examining* the child's physical condition and functional levels and patterns of behaviour in the several areas of development;
- *comparing* these to their manifestation in the home, assessment and other contexts, to norms of healthy and normal development;
- *judging* how far these levels departed from developmental norms, and if there was any link to patterns in known syndromes;
- *inferring* links between the child's current difficulties and current physical condition to past physiological, physical and environmental events in the child's life, and to future development and needs of the child;
- *deciding* if more investigations were required to arrive at a satisfactory decision on all of the above, and what action needs to be taken and what support can be provided to help the child and family move forward;
- *recommending* solutions;
- *planning* assessment activities and implementation of remedial action;
- *agreeing/disagreeing* with colleagues or clients;
- *relating* personally to and the parents;
- *directly supporting* the parents in their struggle to cope with the bad news about the child's difficulties;
- *stating constraints* on all the above processes and;
- *evaluating* how successful or otherwise they have been in carrying out the above processes.

Figure 5.3.3.2, below, presents a schematic view of these nine processes and two qualifying contents which are defined in the next sections. With regards to the *task* processes, note that:

- *Hypothesis* generation has been a major process identified in research on medical problem solving (e.g. Elstein, Shulman & Sprafka 1978), and is now also seen as an essential aspect of NDM (Cannon-Bowers & Bell, 1997). "Hypothesis testing is an essential part of actively open-minded thinking because it involves putting our beliefs to the test of evidence" (Baron, 1994, p.239).

- The three task processes of *describing*, *explaining*, and *predicting* are equivalent to the three components of 'situation awareness' that has become a major concept in NDM research, but the terms have been derived from Rouse & Morris (1986). They are also termed *perception* of elements, *comprehension* of the current situation, and *projection* of future status (Endsley, 1997).

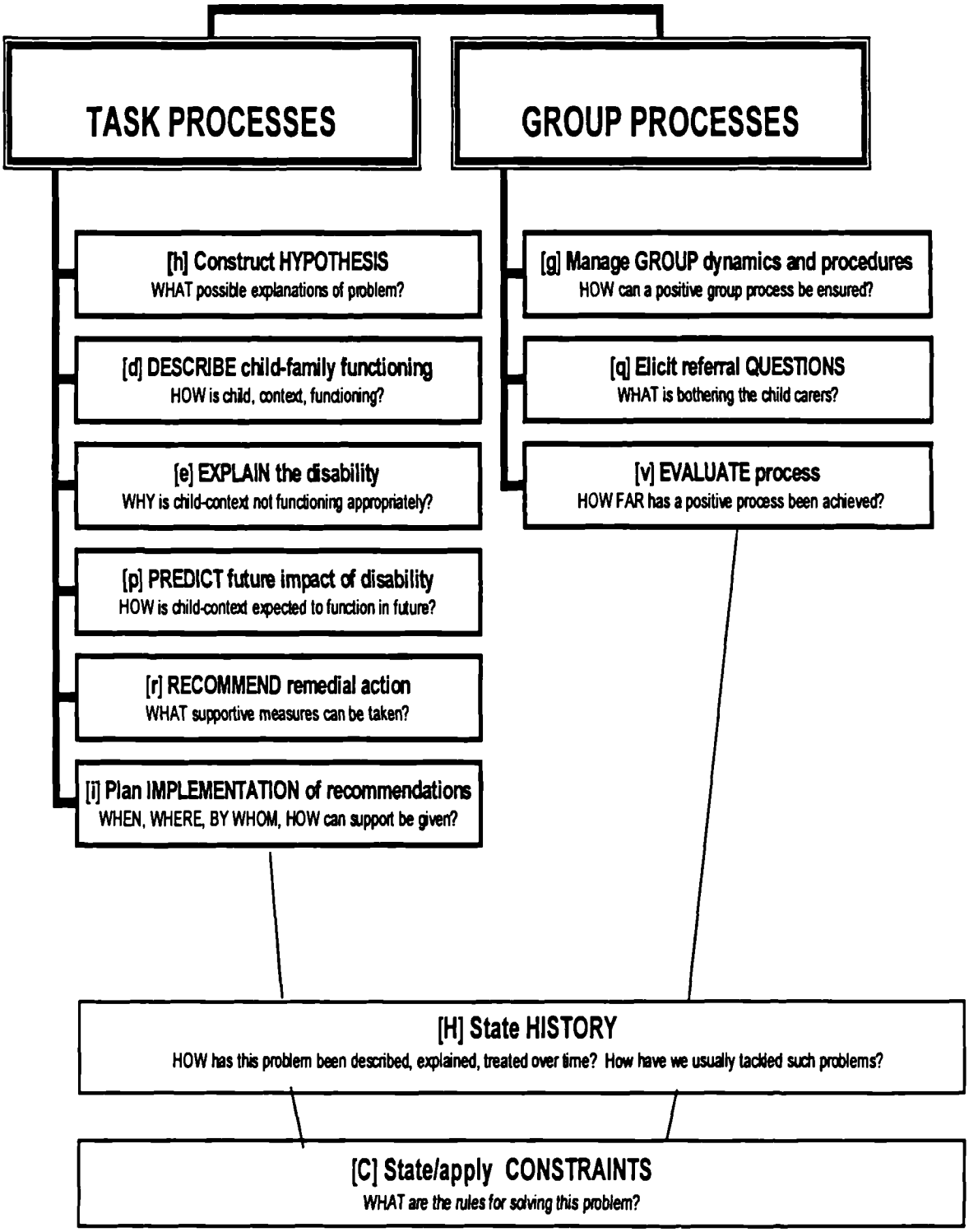
- *Recommending* and Planning of *Implementation* are features of a single assessment session. Making recommendations has always been associated with professional assessment of disability; the planning of how the recommendations were to be implemented was distinguished as a different process as a result of the evidence in the protocols themselves.

With regards to the *group* processes it should be noted that:

- Studies of problem solving groups have generally distinguished between the group's task-focused actions and interpersonal *group-dynamic*-focused actions (see e.g. McGrath, 1991; Rugs & Kaplan, 1993; Devito, 1997).

- The *eliciting* of referrers' questions was developed from the evidence in the protocols themselves as a significant separate process in assessment of disability.

Figure 5.3.3.2:
CODING FRAMEWORK
(a classification system for all problem-solving and decision-making action at single statement and episode levels)



- The *evaluation* process was identified by Voss *et al.* (1983) as a feature of problem solving in social science problems, and was also found to apply to the group process in this study's protocols.

The definitions of each process as adopted for this study are given below.

5.3.3.3. Six TASK processes

The six TASK decision-making processes are defined as follows (see also Table 5.3.3.3):

- **Constructing a HYPOTHESIS [h] about the possible causes of the concerns about the child or about his carers/educators.** In clinical reasoning, the term hypothesis refers to "any ideas, diagnoses, or guesses that label the phenomena observed, or to proposed explanations that will guide the investigation of the patient's problem" (Joseph & Patel, 1990, p.34).

  > Hypothesis testing is that part of the search-inference process in which the thinker searchers for evidence that can strengthen or weaken various possibilities. Each possibility is a possible answer to some question (goal) that inspired the search for hypotheses: What is wrong with the patient? What causes this disease? (Baron, 1994, p.239).

- **DESCRIBING [*d*] *the manifestation of the child and family difficulties* -** what behaviours and features of those behaviours are notable as areas of concern. This process is sometimes termed "perception of elements" including status, attributes, and dynamics of relevant elements in the problem environment (Endsley, 1997). It is distinguished as a mainly bottom-up process of information processing in contrast to the more top down integration of cues into an explanatory model (see also Patel & Arocha, 1995). Thus, in this study, the perception of the child's level of language expression as being at the single word level is regarded as

description, but the integration of this information as a part of the child's general level and pattern of cognitive development is regarded as the higher *explanation* process.

- **EXPLAINING [e] why these difficulties are occurring** - relating the perceived features to classified patterns of development and types of causes. This process has been referred to also as 'comprehension' (Endsley, 1997) and 'diagnosis' (Klein, 1997) in NDM research. The term *explanation* (from Rouse & Morris, 1986) has been preferred because in disability assessment the term 'diagnosis' has often been restricted to technical classification of within-child conditions. Within decision making, diagnostic activity is seen as a search for an *explanation* of the nature of the situation which then largely determines the course of action that is adopted. The explanation thus constitutes a holistic picture, an integrated formulation of why and how the problem has occurred (Klein, 1997). This includes an understanding of the significance of perceived individual elements which is seen as closely connected to one's goals (Endsley, 1997).

- **PREDICTING [p] how the problem is expected to be manifested in the future.** Within NDM research this is often referred to as "projection of future status" of the problem situation. This has been seen as a necessary process in decision making (Endsley, 1997), and as being sequential to a description and explanation of the current problem situation. Again the term *prediction* was preferred over the complementary term of *prognosis* used in assessment of disability because the latter has a more restrictive application.

- **RECOMMENDING [r] remedial action for supporting the child's and family's development**. Though the formulation of the problem represented by the previous three processes can sometimes constitute an end in itself in assessment of disability (Herbert, 1998), the development of relevant recommendations for remedial action are usually an expected part of the assessment.

- **Planning for the actual IMPLEMENTATION [i] of the recommendations.** Again, though psychological assessments are sometimes regarded as completed through the development of recommendations, the data in this study showed that another step was undertaken in the assessment sessions, namely the planning of when, how, where and by whom the recommended actions were to be implemented.

Specific descriptions for coding of processes

In specifying the applications of each of these codes (see Table 5.3.3.3, below), it was found that such specifications were in fact relating the process captured in the code to the different *contents* mentioned earlier. For instance, *describing* was applied to both the child's physical condition as well as behaviour; *explaining* the child's difficulties was in terms of classification (label) as well as in terms of aetiology (causation); *recommending* was in terms of new investigations as well as treatment, placement or other management and teaching strategies.

Table 5.3.3.3: Six types of TASK processes

(h) Construct *HYPOTHESIS* re causes of concern and presenting problems:
- **he** = hypothesise on possible explanations of the child's difficulties;
- **he** = hypothesise on possible goals of the parents or support services.

(d) State *DESCRIPTION* of child and family system functioning:
- **d*b*** = describe behaviour and interests,
- **d*f*** = describe levels of general functioning,
- **d*l*** = describe language functioning,
- **ds** = describe social interaction functioning;
- **d*m*** = describe medical condition;
- **dc** = describe context (family, nursery, services) functioning;

(e) State *EXPLANATION* (diagnosis) of system functioning:
- ***ecau*** = state what caused or is causing child or context not to function up to expectations;
- ***elab*** = state classification (label) of child's condition within a known type of syndrome or condition

(p) State *PREDICTION* of system functioning:
- **p** = state expected future development, status or needs of the child or child-context systems (prognosis).

(r) State *RECOMMENDATIONS* for further investigations or remedial action:
- ***rnew*** = state need for NEW investigations,
- ***rsol*** = state SOLution: medical treatment or educational provisions;
- ***rstr*** = state STRategy for management/teaching of child (i.e. distinguished from placement as it refers to particular ways of dealing with child in any environment).

(i) State plan *for IMPLEMENTATION:*
- **i** = state plan for IMPplementation of recommendations: distinguished from r because it refers to specific logistics (persons, times or places) for implementing rnew, rsol or rstr.

The above different types of specific meanings of each code became part of its description (indicated by the ➢ in Table 5.3.3.3). For the purpose of later analysis, the application of each process to the different type of content was recorded through the use of subcode indices attached to the code index (shown in italics in the table - e.g. **d*b*, d*f*, d*l*, ds, d*m***) which aided later processing. However, coding can proceed without use of subcodes. Thus a second coder was given the specifications in Table 5.3.3.3 as information on what each code included but was not given the subcode indices shown in the table.

5.3.3.4. Three GROUP processes

Because the assessments were transdisciplinary, i.e. carried out by a group of professionals jointly together with the parents, the protocols also included procedures that were only intended to ensure a positive social interaction process. Three high-level categories of social interaction operations were distinguished (see Table 5.3.3.4).

- **Managing the GROUP process [g] to ensure positive group interaction** (chairing, conducting, directing, ensuring participation, empathising, relating personally, avoiding polarisation). Some of these processes may be related to the TASK (such as summarising issues) and are therefore included under task processes. In this study, the group process code is restricted to actions with regard to the well being of the group and of individual members in the group (cf McGrath, 1991; Rugs & Kaplan, 1993).

- **Eliciting referrers' QUESTIONS [q] or concerns** (from letters/reports or other communication previous to the assessment, or directly from the parents or professionals working with the child). Again this process was closely tied to the task processes, but was to be coded separately when the search was focused on getting the referrers' concerns through open-ended questions. This code picked protocol segments that were focused on what was bothering the referrers rather than on behaviours manifested by the child.

- **EVALUATING [v] the group decision-making process**, by reflecting on what has happened in a previous session or sessions, or in previous decisions. This process was found to be part of problem solving in social science problems where the solver could not check out actions taken but rather evaluate the possible consequences of suggested solutions (Voss *et al.*, 1983). In the protocols of this study, there were few such evaluations and these referred to the way the assessment was managed vis-à-vis the

parents.

Table 5.3.3.4: Three types of GROUP processes

(q) *Elicit* referral *QUESTIONS*

- **q** = state/elicit referral questions from letters/reports or other communication previous to the assessment, or directly from the parents or professionals working with the child. These questions represent concerns focused on the adults rather than on the child: e.g. concern about understanding the child's level of difficulties, or her future, what parents can do about the problem etc.

(g) State/apply *GROUP* management plans, procedures

- **g** = state plan for managing GROUP procedure: how the assessment is to be carried out: i.e. what goals are to be aimed at; and how the assessment or discussion is to be conducted;
- ***gs*** = state/make SOCIAL interaction move, i.e. not intended primarily to produce move to solve the problem but to improve relations with other discussion participants: e.g. ask for a member's participation; state a relation to a participant or to the parents; empathise with another participants' statement; reassure the parents.

(v) State *EVAluation* of assessment process:

- **v** = State reflection on the assessment process: EVALUATING how the assessment is getting on, or whether the participant is satisfied or otherwise with what had occurred.

GROUP processes were often intermixed with the TASK processes. Thus, deciding how to present findings on a particular cause in ways appropriate to parents feelings could be coded as both a TASK *explanation* process as well as a GROUP social interaction process. Such segments were initially coded as belonging to both processes. But it became too complicated. It was therefore decided that the **g** code would be applied only when no task process code was explicitly entailed, thus allowing the verbal protocol analysis to focus on TASK processes. The group process would however become the dominant focus in the conversation analysis.

5.3.3.5. Two qualifying contents: stating HISTORY & CONSTRAINTS

While all assessment processes could be captured in the codes above, it was found important to capture separately two ways in which the application of these processes might be qualified. First of all, in assessment of disability, each process could be applied either to the CURRENT manifestations of the problem, or to HISTORICAL antecedents to the current assessment of the child and his or her context: child and family background and developmental history. In assessment of children suspected to be within the autistic spectrum, developmental characteristics up to the age of three have great significance for the formulation of a diagnosis about the child (Volkmar, Klin, & Cohen, 1997). Professionals may also refer to how they have been working together over time. Two types of process applications to historical antecedents were found:

- **H** = Describing the child's developmental HISTORY, stating past explanations, predictions, recommendations, and implementations of action, and past input from the parents' family and health, social and education services;
- **H*tea*** = Stating history of professional TEAM or parent-professional relationships.

The application of each component process may also not consist of an actual description, explanation etc. of the problem, but instead state a CONSTRAINT on that process: such as the regulations of the institution within which the problem has to be addressed, lack of sufficient information to decide on a description of the child's physical condition, or difficulty in predicting the child's future development, or lack of the resources that might be appropriate to recommend for the child. Such constraints have been regarded as an important aspect of problem solving (see e.g. Voss *et al.*, 1983). Moreover, constraints are an important part of the framework for problem solving in general and are therefore central to this study. Two types of constraint statements were found:

- Stating/applying CONSTRAINTS on problem solving process: constraints of institutional norms, discipline orientation, personal experience and values – i.e. leading the solvers to regard certain moves as those to be expected – the 'legal' moves;

- Stating/applying CONSTRAINTS of the situation: such as lack of information, lack of facilities, lack of knowledge or scientific instruments, lack of time.

Both **H** and **C** are *qualifiers* and do not replace the component processes listed above, but are an additional qualifier. Thus a coded segment could be a description [**d**] of past [**H**] child functioning, and therefore be coded as **dH**. Similarly a statement of constraint [**C**] can be about getting a description [**d**] of the child, and thus be coded as **dC**.

5.3.4. Hierarchical levels of analysis

5.3.4.1. Inferring processes

The above processes provided the basis for segmenting and coding the assessment protocols. These processes were not directly stated in the protocols: professionals would not say, "Let me describe the child's communication skills," but rather, "The child can say single words." However, one can reliably infer from that statement that the goal was to apply the DESCRIBE process to the child's communication behaviour: thus that statement could be coded as [**dc**] (DESCRIBE communication).

As is usual in verbal protocol analysis, all the discussion protocols were segmented into single statements, each of which could be coded as the application of one of the above problem solving processes to one of the

specified types of content (see e.g. Ericcson & Simon, 1993; Voss *et al.*, 1983; Green & Gilhooly, 1996).

5.3.4.2. Hierarchical levels of analysis

While segmentation and coding of individual think-aloud protocols has been usually done at the single statement level, it has also been applied at more global levels, such as at the level of problem solving *episodes*, each episode representing the subgoal of solving a subproblem:

> Certain steps in solving a particular problem may be "obvious," other steps problematic. For example, solving a problem in physics may involve writing down the appropriate algebraic equation, then solving it. ... solving the equation, once discovered, may be non-problematic, to be summarised as a single step in the problem behaviour graph. (Ericcson & Simon, 1993, p.272)

Problem solving research has suggested that "a subject often organises his problem solving efforts in terms of a hierarchy of subgoals" (Ericcson & Simon, 1993, p.272; cf. Case, 1985).

In research on ill-structured problem solving in the social sciences, Voss *et al.* (1983) similarly segmented the protocol into subgoal episodes which were termed "arguments," while still segmenting each argument into single statements of reasoning. They suggested that the solver is involved in integrating two processes: a *problem solving* process and a *reasoning* process. The solver decomposes the problem into subproblems, within each of which he or she builds an argument through reasoning (Voss *et al.*, 1983). Thus there is a reasoning process that is subservient to the problem solving process.

Voss *et al.* thus developed **a two-level analysis:**

(1) The lower level consisted of single-statement reasoning chains, each statement being coded as representing a goal of the *reasoning process*

such as state fact, state reason, state comparison, state outcome, state qualification (see Table 5.3.4.2a, below).

(2) This reasoning process was driven by *a higher level problem solving structure* consisting of subgoals such as state subproblem, interpret problem statement, state solution. Thus Voss *et al.* applied two different categories of processes, one to the higher problem solving structure, and one to the reasoning structure (Voss, 1988).

Table 5.3.4.2a:
Possible types of single-statement *reasoning* moves within one subgoal (cf. Voss, 1988)

Search = state search for information: usually in the form of a question;
State subgoal = state explicitly the subgoal to be achieved, e.g. the subproblem to be addressed or the solution being recommended;
Elaborate = state elaboration of previous statement: could be answer to a question or addition of new information on occurrence of the behaviour;
Agree = just stating agreement with previous statement;
Oppose = state disagreement with previous statement;
Present Specific Case = refer to a specific instance to illustrate previous statement;
Compare = state comparison: child to other child, child's behaviour at different places or times, with different objects; what parents, teacher reported and child's observed behaviour;
Qualify = state qualification of previous statement; distinguish from *Constraint* because it does not imply any influence on problem solving but rather another different view of the statement;
State Reason = state reason for previous statement: why particular statement made, is right, or why suggested action should be undertaken;
Assert fact = state theory about previous statement (this is often a dictum or scientific, technical fact - not specifically tied to child);
State Outcome = state an outcome of previous statement.

In this study, the model has been simplified by applying the same nine task and group processes at both the reasoning and problem-solving structure levels. Thus, for instance, both single statements as well as episodes could be coded as *describing*, *explaining*, *predicting*, *recommending*, or planning *implementation* of the recommendations. But the subgoal level still drove the reasoning level. This is illustrated in Table 5.3.4.2b, below, which shows how the subgoal of one episode, "EXPLAIN context," drove the reasoning within that episode; while each statement of reasoning could also be coded within the six task component processes. In the initial referral meeting at Site E2, the clinical psychologist (C2) set up the following subgoal: "EXPLAIN CONTEXT: WHY DELAY IN PROVIDING SUPPORT SERVICES TO CHILD." She then engaged in a reasoning chain to serve that subgoal. And in so doing she in fact applied five TASK component processes at the single-statement level (see Table 5.3.4.2b):

Table 5.3.4.2b: Example of problem solving at two levels: (Level 1 single-statement REASONING structure served a Level 2 SUBGOAL structure)

Level 2: PROBLEM SOLVING STRUCTURE ▸	SUBgoal 19* (*inferred*): **EXPLAIN CONTEXT: WHY DELAY IN PROVIDING SUPPORT SERVICES TO CHILD**
Level 1: REASONING STRUCTURE ▸	C2+: **[e]** *Well I think there was an issue, I think there are certain things.* **[e]** *One was dad conveyed to me very quickly that there was an issue around consent from mum.* **[e]** *He actually said that, mum had a brother, she had a big family back in Nigeria, and one of her brothers was a late speaker,* **[d]** *and he didn't speak until he was five.* **[p]** *So mother had a belief that David would pick up when he was about five,* **[r]** *and really didn't want anyone to get involved with David.* **[i]** *I think that's part of the reason why people didn't start to doing things earlier,* **[i]** *but not the whole reason. ...* (E2.Prot.a)

*SUBgoal 19 = 19th SUBgoal addressed in the protocol of the initial referral meeting of Case E2 (ProtE2.a).
+C2 = Clinical Psychologist at Site E2.
Key: [ ] = the start of a new segment and its coding index;
d = describe; e = explain; p = predict; r = recommend; i = implement

While the first two segments start an explanation of the context (why family delayed search for support), the next ones represent a report of the mother's formulation of the child's problem and involve the full sequence of five task processes (except that **e** comes before **d**):

> **e**: M's brother's problem (and thus also her son's) was explained (classified) as that of a "late speaker";
> **d**: M's brother is described as not speaking before the age of five;
> **p**: So M predicted that her son would also speak late at around five years;
> **r**: Therefore, she would not recommend the involvement of any professional support;
> **i**: Thus C2 concluded this was partly the reason why support services could not be implemented earlier.

Thus, the subgoal for explaining the context constraint on providing support for the child, drives the reasoning chain that supports that subgoal. The single statements within the reasoning chain, however, constitute a similar process of explanation, description etc.

5.3.4.3. MAIN goals

Even when the discussion protocols were segmented and coded into episodes for which a subgoal was inferred (see Table 5.3.4.2b above), the number of such episodes was too large and complex to derive a meaningful structure for the whole assessment protocol. What had served to structure the Voss *et al.*'s single-subject problem-solving monologues, was not sufficient for the more complex protocols of the present study: the protocols are discussions, are more varied (including sequential separate sessions interspersed with assessment activity with the child and family), and are more prolonged (spanning 3 hours).

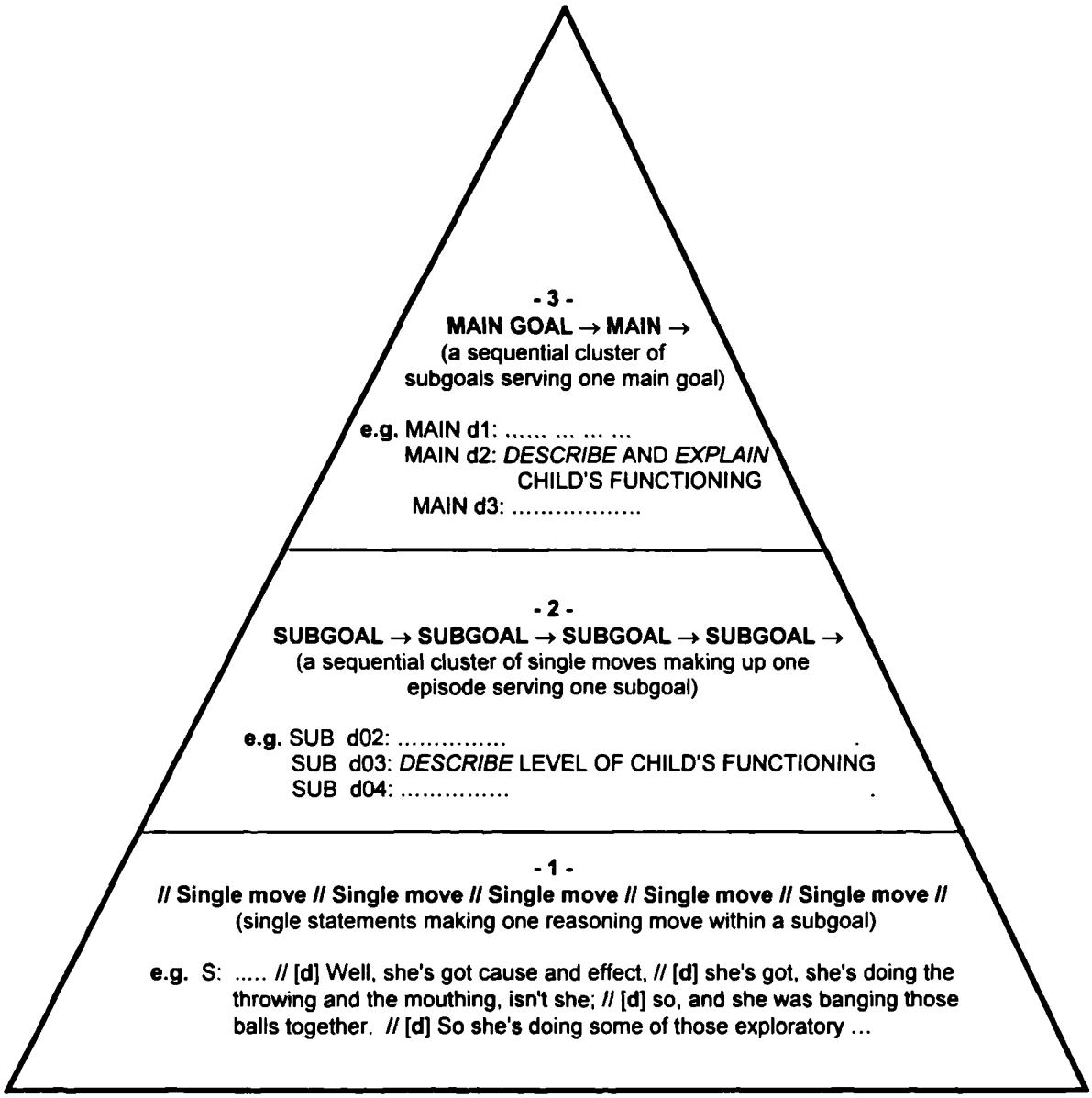
It was, therefore, found useful to further group the episodes into larger multi-episode segments serving a larger MAIN goal. Thus the above SUBgoal "EXPLAIN CONTEXT ..." was itself only one of a chain of subgoals driven by a higher MAIN GOAL, namely SEEK DESCRIPTION OF CLINICAL PSYCHOLOGIST'S CONCERNS.

5.3.4.4. Three hierarchical levels of analysis

Thus, while the episode level (SUBgoals) became the most meaningful segment through which to analyse the processes that professionals engaged in throughout the protocols, the search for a general sequential structure of the whole assessment process was better met through the MAIN goal structure. At the same time, the single-statement reasoning process too was important for ensuring a close grounding to the raw data, segmenting and coding reliability, as well as permitting an analysis of professionals' knowledge schemas.

Thus the model adopted for capturing the sequential and knowledge structure of this study's discussion protocols included **three hierarchical levels** of analysis, as shown in Figure 5.3.4.4, below. The Figure shows how the single model of problem-solving processes described above (# 5.3.3) was applied at different hierarchical levels of analysis. Note that the processes at each level are the same, namely six task-process components (*construct hypothesis, describe, explain, predict, recommend* and *plan implementation*) and three group-process components (manage the *group process*, elicit carer *questions*, and *evaluate* the group process). However, each higher level structure drives the one below it.

Figure 5.3.4.4:
Three hierarchical levels of analysis of problem solving and decision-making goals in each discussion protocol



An example of the segmentation and coding of the protocols at the three hierarchical levels of analysis is given in Appendix III; and Appendix IV gives a sequential list of the main goals and subgoals inferred for each discussion protocol.

5.3.4.5. Inter-rater reliability check at single-statement level

One fourth of the protocols, namely all M1 discussions except M1Prot.f, were also segmented and coded at the single-statement level by a second coder. She was a research colleague and also an educational psychologist. She was asked to use the main TASK process codes (**d, e, p, r, i** - there was only one **h** segment at the single-statement level in these protocols), and only one code for the GROUP processes (**g** - there were in fact only two **v** segments in these protocols), together with **H** and **C** as qualifiers. The subcodes of each code by content as shown in Figures 5.3.3.3 & 5.3.3.4, above, were only given to her as an illustration of the specification of each code.

She found the framework quite easy to understand and apply. There were some important discrepancies between the two codings which are explained below. However, satisfactory agreement levels on both segmentation and coding were obtained as shown in Table 5.3.4.5a, below. The second coder [A] identified 93% of segments identified by the author [P], though only 82% agreement was reached when all segments identified by both were put into the equation. Moreover, 87% agreement was reached on the coding of those segments identified by both. This resulted in a very good Cohen's *kappa* of .82. Bakeman and Gottman (1986) suggested that *kappas* should not be below .7, but cited Flies's (1981) less stringent criteria: *kappas* of .40 to .60 are fair, .60 to .75 good, and over .75 are excellent.

Table 5.3.4.5a:
Agreement levels between author [P] and second coder [A] for segmentation and coding at statement-by-statement level of Site M1 protocols

	P	A	TOTALS P+A
SEGMENTATION			
Total segments by each	a.* 70} b. 463} d. 188} **1177** e. 456}	a. 87} b. 549} d. 194} **1250** e. 420}	
Total segments identified by both			a. 69} b. 456} d. 176} **1094** e. 393}
Identified by P but omitted by A	a. 1} b. 7} d. 11} **85** e. 66}		} } } }
Identified by A but omitted by P		a. 18} b. 95} d. 17} **158** e. 28}	} **243** } } }
TOTAL SEGMENTS IDENTIFIED			**1337***
A % agreement with P's segments	1094 / 1177 = **93%**		
P % agreement with A's segments		1094 / 1250 = **88%**	
% agreement on total segments (including those omitted)			1094 / 1337 = **82%**
CODING			
Codes agreed			a. 59} b. 439} d. 147} **956** e. 311}
% agreement on Codes+			956 / 1094+ = **87%**

* Index of protocol: a = initial referral meeting; b = parent interview ...
* There were 25 segments identified by A that have been ignored in this calculation because they were unclear text coded as "??" by A and which had deliberately been ignored by the author.
+ Because omissions were approximately proportionately spread for each code, it was more relevant to calculate code agreement levels with regard to agreed segments only.

Table 5.3.4.5b:
Coding agreement by separate codes
(for calculation of Cohen's *kappa:* $k = .82$)

A codes	P (author) codes: d	e	p	r	i	g	Totals	* omitted
d	457	4	4	16			481	75
e	43	106	3	9			161	15
p	4		61	3			68	3
r	2	3	3	213	25		246	27
i	1			15	54		70	13
g					2	58	60	22
Totals	507	113	71	256	81	58	1086	
omitted	30	7	9	27	5	5		

* There were 25 other segments omitted by P which were in fact coded as unclear - ?? - by A (and 7 other agreed segments coded by A & P as ??)

Table 5.3.4.5b, above, gives a matrix of the agreement pattern between A (rows) and P (columns) for each code. Amount of agreement (totalling 956, i.e. 949 + 7 coded as "??") is shown in the shaded boxes along the diagonal. The other boxes reveal some of the difficulties in the coding framework which are explained below.

A coded 43 segments as **e** *which P coded as* **d**. This discrepancy arose because sometimes a *description* of the child's physical or behavioural characteristics was discussed in the context of *explaining* the difficulty. However, for the purposes of later analysis, it was useful to code statements as **e** only where the statement made a causal or classificatory relation between the child's condition and her difficulties. For instance, there was a discussion

on what the CT Scan had revealed about the brain structure and function: these constituted a statement of description of the child's physical status rather than a statement of a cause of the child's difficulties. Another reason for the **e/d** code confusion was related to segments on levels of functioning: At what point did a description - **d** - become a classification - **e** - of the child's difficulties? The current study adopted the system of assigning levels of particular areas of functioning such as language or performance to **d** and only general functioning levels or patterns of skills to **e**. The second coder tended to assign both to **e**. Thirdly, A sometimes also assigned **e** in the more wider sense of explanation rather than diagnosis: thus in the discussion on rocking, statements with regards to it not being a naughty behaviour and not an interfering behaviour were assigned to **e** by A; similarly in the discussion on the potential harmful effects of oxygen treatment, A assigned statements to **e** which the author coded as **r**, because they concerned treatment decisions rather than causes of the child's difficulties.

*A assigned 16 segments to **d** which the author coded as **r**.* This difficulty arose in descriptions of the provisions and strategies for helping the child. For instance, while the use of sign language in the nursery might be regarded as describing the child's context, it seemed to the author more useful for processing to categorise these under recommendations (past or current) on ways of supporting the child. Indeed it was decided to code these as **i**, since they are better regarded as recommendations which have already been implemented.

*A assigned 25 segments to **r** which P assigned to **i**, and 15 segments to **i** which P assigned to **r**.* These two codes were closely interrelated in so far as they dealt with the same content - provisions and strategies for supporting, managing or treating the child. The only distinction between the two codes was the context: **i** represented the planning for *actual implementation* of recommendations. This distinction is usually made in problem solving and decision making between decisions and action. In this study the distinction appeared to be an important feature of the assessment since, after decisions

were shared with the parents, the latter often showed concern about a plan of action, that is the actual implementation of the recommendations, asking about actual times, places and personnel. Moreover, planning implementation was important because of the need for co-ordination between the tertiary centre and local services at Site M (especially with regard to medical investigations), and between the Statementing team and the schools and family at Site E.

The above discrepancies and clarifications were discussed and resolved with the second coder.

5.3.5. The nature of subgoal episodes

While the single-statement level was important for establishing coding reliability, it is important to understand how SUBgoal episodes and MAIN goal multi-episodes sequences were defined. It is in terms of such episodes that the results of this study will be reported.

5.3.5.1. Definition of subgoal episode: one process applied to one problem area

The search for an organisational framework for the complex sequential distribution of subgoals in the protocols revealed two underlying determinants of episodes of problem solving (see Table 5.3.5.1 below). The boundaries of an episode were generally set by the application of a single problem-solving *process* (e.g. DESCRIBE or EXPLAIN ...) to one *problem area*.

Thus, "DESCRIBE child's language," and "DESCRIBE child's stereotypic behaviour" constituted two separate episodes. Each subgoal thus had a *process* and *content* dimension. This permitted the analysis of all episodes

within a matrix with the two dimensions of *process* and *problem area* (see Table 5.3.5.1 below).

Table 5.3.5.1: Two underlying structures in the problem solving schema

Problem area→ / Process ↓	**Physical condition**	**Non-verbal functioning**	**Communication**	...
Construct HYPOTHESIS	HYPOTHESISE physiological dysfunction	HYPOTHESISE lower than average functioning	HYPOTHESISE difficulties within autistic spectrum	...
DESCRIBE	DESCRIBE motor co-ordination	DESCRIBE play skills	DESCRIBE level of comprehension skills	...
EXPLAIN	EXPLAIN motor co-ordination	EXPLAIN rigid play skills	EXPLAIN delayed comprehension skills	...
PREDICT	PREDICT motor co-ordination development in next two years	PREDICT development of play skills in next two years	PREDICT development of comprehension in next two years	...
...	...	...	...	...

5.3.5.2. Example of an episode

Take, for instance, the opening of the professionals-only discussion (M1.d). The three professionals (C1, S1 and P) elaborated a *description* of the parents' interaction with the child. This was then abandoned to be used much later in the same discussion and in the final meeting with the parents to suggest strategies for supporting the child's development. Note how this *description* subgoal was immediately followed by the setting of an *explanation* subgoal (classifying the child's difficulties) on a new problem area (child's level and pattern of functioning):

SUB d01: DESCRIBE CONTEXT: PARENTS ADEQUATE

C1: So, as we were saying in there, the parents, they just react really well with her. And even the fact that they correct each other to use a consistent phrase.

S1: Yes.

C1: It's just

S1: Yes. I mean they kind of monitored her, didn't they, when they were, one of them was saying they just let her run around a bit. It's easier if you're not the one doing the whole thing, isn't it, once she needs to have a break and move around.

C1: So I think they understand her very well and are

S1: Well they treat her very appropriately, at an appropriate level.

P: Doing very well. (*end of episode*)

S1: I mean she is got, she looks to me like very globally delayed ... (Prot.M1.d)

5.3.5.3. Defining an episode by one problem area

In contrast to the above, sometimes episodes had two or more process subgoals inextricably intertwined. In such a case the boundary of the episode was set by the fact that only one subproblem was being addressed. For instance, the following episode in the same discussion - M1.d - consisted of alternating attempts at *describing* the child's motor co-ordination (wide-based gait) while suggesting possible *explanations* (causes) for it. In the extract from M1 below, the existence (*description*) of an age-inappropriate gait was established quickly, and P moved towards an attempt to *explain* the problem; however, she alternated this with *descriptive* moves - 'her muscle tone is normal', which were elaborated by C1 and then again by P. Such an episode was thus constituted by the content - only one subproblem (i.e. motor co-ordination) was being reviewed; but two processes were inferred: "DESCRIBE AND EXPLAIN ...":

SUB d14: DESCRIBE AND EXPLAIN CHILD'S WALKING

S1: And its her funny walk.

P: She is a little bit wide based, isn't she? There aren't: I found it quite difficult to assess her reflexes. I suspect there isn't any neurological cause for her gait. Probably [wide based gait] due to immaturity because her [muscle] tone is normal. ?? her motor problem. She is not actually ataxic when she, you know, her fine motor skills are quite normal.

S1: She is wobbly like a sort of normal younger child would be wobbly?

P: Well I think probably she is.

C1: And what she was doing when she was walking fast was tripping over her toes.

P: And she turns [feet] in a bit. An immaturity of gait. I don't think there's any clear [cause?]. *(end of episode)*

S1: In terms of management, they ... (Prot.M1.d)

Note how each episode, had a clear beginning and ending, making it stand on its own as a distinct segment. Thus, in both excerpts above, S1 clearly moved on to another separate subproblem. No attempt was made to bridge the two episodes in this protocol because it was a professionals-only discussion carried out in a brainstorming style. New episodes were frequently started by another participant, but sometimes one participant moved to a new episode within one turn: in that case the ending and beginning of an episode were marked by a pause or linguistic structure: e.g. "There was one other thing ..."

5.3.5.4. Sequential structure of SUBgoals

The sequence of processes applied and problem areas addressed in each protocol was messy. For instance, in the episode shown above, the problem area of parent behaviour was described at the start of protocol M1.d; it was described again in the middle of protocol M1.e, and then followed by a recommendation for the relevant strategies to be continued. On the other

hand, certain problem areas, such as hearing and vision, were dealt with as separate from the rest, occurring at the beginning or at the end of a protocol, but described and resolved in one episode.

Moreover, not all component processes might be applied to a problem area: for instance, hearing might be subjected only to processes of description and recommendations for investigation to achieve a clearer description.

Such decomposition into subproblems and the fragmentation of the problem solving processes applied to them was partly due to the transdisciplinary setting. For instance, one participant set an EXPLANATION subgoal which was interrupted by another participant who focused on a RECOMMENDATION subgoal, but the first participant later went back to the EXPLANATION subgoal.

5.3.6. Clustering of episodes into MAIN goals

As has been mentioned above, in order to reduce further the number of elements in the sequential structure of the protocols, it was found useful to group sequential episodes under larger MAIN goals. This was done by combining processes that addressed one problem area, or combining problem areas under a single process.

Thus, at the MAIN goal level of analysis:

- *Processes* were clustered into two main processes: the understanding processes - describe > explain > predict, and the solution processes - recommend remedial action and plan its implementation. Note, however, that recommendations for medical investigations or further educational reviews were regarded as part of the description process; they were thus separate from solution processes even though decisions about them were in the form of recommendations.

- *Content* was reduced to four problem areas: medical, behavioural, context and group interaction areas.

Table 5.3.6a, below, shows how four sequential sub-episodes in protocol ProtM2.d (Professionals-only evaluation discussion) were clustered into one main goal of describing and explaining the child's level of functioning:

Table 5.3.6a: Example of clustering of four subgoals under one main goal in Protocol M2d (Professionals-only discussion)

MAIN GOAL d2: DESCRIBE & EXPLAIN CHILD'S BEHAVIOURAL FUNCTIONING
SUB d02* (004)+ P DESCRIBE MOTOR FUNCTIONING
SUB d03 (021) C DESCRIBE LEVEL OF GENERAL FUNCTIONING
SUB d04 (042) S DESCRIBE LEVEL OF COMMUNICATION & INTERACTION
SUB d05 (063) C EXPLAIN: AGREE DIAGNOSIS AUTISM & SLD

*SUB d02 = SUB-episode in sequential numbers by protocol (d=professionals-only discussion)
+(004) = Single segment level number in sequential series within each protocol

The above example has been chosen as typical. However, it should be noted that sometimes a series of episodes driven by one main goal were interrupted by an unrelated episode. In that case the single deviating episode was disregarded in what may be considered as a 'smoothing' procedure that attempts to capture the main flow of problem solving and decision making. This smoothing was applied when the deviating episode did not reflect a shared subgoal, or when the deviating subgoal was set again and processed at another point of the discussion. Even in the above main goal, some smoothing occurred: the "Describe motor functioning" episode included attempts at deciding whether there was any physiological problem: this should strictly have been assigned to a different main goal on the medical problem area. But it could meaningfully be attached to the main goal of describing and explaining the child's general level of functioning.

Table 5.3.6b, below, shows how a 'smoothing' procedure was applied in constructing one of the main goals of Prot.M2.e (Concluding parent conference). SUB 12 and 14 are deviations to group process and solution process respectively. However, they can be meaningfully regarded as asides: the main goal here was being conducted by C1. Thus, C1 treated SUB 12 as an aside: here she reassured the parents that they were already helping their daughter to help them overcome their shock at hearing the news about autism, but then continued her previous line of thought about the diagnosis (SUB 13). When S1 tried to support the parents by trying to focus on ways in which the child could be helped (SUB 14 - recommend), C1 did not heed the attempt and went on to restate the diagnosis (SUB 15).

Table 5.3.6b:
Example of smoothing procedure in clustering subgoals under one main goal in Protocol M2e (Concluding parent conference)

GOAL e4: EXPLAIN & PREDICT: CHILD HAS AUTISM & SLD

SUB e10* (073)+ C EXPLAIN: DIFFICULTIES ARE LOW MENTAL AGE & AUTISM
SUB e11 (082) M OPPOSE EXPLANATION AS AUTISM
SUB e12 (091) C REASSURE PARENTAL ADEQUACY
SUB e13 (096) C EXPLAIN: AUTISM A RAG BAG TERM
SUB e14 (101) S FOCUS ON REMEDIATION
SUB e15 (102) C RE-EXPLAIN: PATTERN WITHIN AUTISTIC SPECTRUM
SUB e16 (105) M PREDICT: ASK IF WILL CATCH UP

*SUB e10 = SUB-episode in sequential numbers by protocol (e=concluding parent conference)
+(073) = Single segment level number in sequential series within each protocol

One consequence of the clustering of episodes that should be noted is that the main goal definition sometimes does not reflect the appropriate balance of effort dedicated by the participants to each subproblem or component process. For instance, PREDICT has the same importance in the definition of the main goal in Table 5.3.6b above, but in fact is represented by a brief episode (SUB

e16) in contrast to the number of episodes on explaining the problem - the diagnosis of autism.

All the above observations point out that the main-goal structure is an abstracted construction that may be quite distant from the concrete evidence of the actual decision-making process. This grounding of the main-goal abstract structure was however ensured by always reviewing the underlying episode structure during interpretation of the significance of the main-goal structure. Thus, while the comparative analysis between cases at each Site focuses on the main-goal structure (see Appendix IV), a sequential list of main goals with attached subgoals is also given.

5.4. Discourse and Conversation analysis

The verbal protocol analysis focused on the task processes. However, as reviewed in Chapter 2, transdisciplinary assessment of disability is not just a scientific problem; it is also a social or political negotiation problem. Verbal protocol analysis is not appropriate for the analysis of the social interaction dimension. This dimension is better approached through discourse and conversation analysis (see e.g. Leprohon & Patel, 1995; Parrott, Greene & Parker, 1992; Beck & Ragan, 1992; Riehl, 1998).

5.4.1. Discourse analysis

Discourse analysis focuses on "talk and texts as social practices" (Potter, 1996). It is usually applied to naturally occurring talk, and is an "analysis of what people do," emphasising "the way versions of the world, of society, events and inner psychological worlds are produced in discourse" (Potter, 1997,

p.146). Discourse analysis is thus very relevant to those questions of this study that concerned how social interaction within a particular institutional setting and group dynamic context constituted an orienting framework for understanding and formulating judgements and decisions about a child with disability and his or her family and supporting services.

5.4.2. Conversation analysis

Conversation analysis is here regarded as a subtype of discourse analysis (cf. Van Dijk, 1998), especially in its application to the study of institutional interaction. This approach has pointed out how *institutional interaction*:

1. normally involves the participants in specific goal structures which are tied to their institution relevant identities: doctor and patient, teacher and pupil, and so on.
2. involves special constraints on what will be treated as allowable contributions to the business at hand.
3. is associated with inferential frameworks and procedures that are particular to specific institutional contexts. (Heritage, 1997, pp.163-4)

Thus, in this study, discourse and conversation analysis are used to investigate the interpretive and negotiation frameworks reviewed in chapter 2, that is the way the professionals construed their decision-making task within the institutional setting of each Site, and the way their social interaction alignments within the group dynamic setting influenced the formulations of the nature of the problem and relevant solutions.

5.4.3. Reliability and validity criteria

The way this analysis is carried out is different from verbal protocol analysis since it does not involve the use of a detailed coding procedure: "A large part of doing discourse analysis is a craft skill" (Potter, 1997, p.147). There are

however reliability and validity criteria within this approach, of which the following four were used in this study:

(1) a focus on deviant cases [or deviant patterns where usual expectations as espoused by participants were broken with significant consequences, thus highlighting the role of the standard pattern];
(2) checking that participants themselves orient to claimed phenomena [both within the discussion and the interviews],
(3) coherence with other discourse analytic studies, and ...
(4) the evaluation that readers themselves can make when they are presented with a transcript alongside its analytic interpretations [entailing the inclusion of rather extensive extracts from transcripts]. (Potter, 1996, p.138)

Thus, first of all, cases where participants deviated from espoused approaches will be the focus of this analysis: such as in the shocking way the diagnosis of autism was received in one case at Site M (M2) where the professionals prided themselves with taking great care to be supportive to the parents in the way they communicate the bad news; or in the unusual situation where a psychodynamic approach dominated the assessment of a child's educational needs in a behavioural setting at Site E (E1).

Secondly, especially in accordance with conversation analysis method, the interpretation of participants' talk will be sought in the other participants' interpretation of it as they respond with acceptance or rejection or other response, and which response is in turn confirmed, repaired or rejected or otherwise by the first participant (Pomeranz & Fehr, 1997).

Thirdly, the phenomena reported in this study will be linked to other discourse analytic research on inter-professional and professional-parent interaction in assessment of disability (e.g. Armstrong, 1995; Gill & Maynard, 1995; Abrams & Goodman, 1998).

Finally, extracts illustrating the phenomena under study will be provided in the reporting of the results. Though this has to be limited to avoid tiring the reader, an attempt will be made to include one illustrative excerpt of conversational sequences for each phenomenon.

5.5. Thematic analysis for interview data

As indicated above, interview data were intended to provide triangulation and elaboration of the discussion protocols. The interview transcripts were therefore subjected to thematic analysis, using the same coding framework as for the verbal protocol analysis of the discussions, but applied only at paragraph rather than single statement level. In contrast to the coding and analysis of the discussion protocols, the sequential structure of the interviews was not relevant to this study.

5.6. Global reading of transcripts & memoing

While the results of the research were finally obtained through the detailed analysis of the protocols, statement by statement, it was important to get a feel for what was generally going on in these assessments through global readings of the data. Though holistic or general impressions are vague, they help to avoid missing the wood for the trees.

These global views of the events under study occurred in the first place through the general impressions obtained during the observation of the events. This holistic view was elaborated through a global reading of the transcripts of each case. At the widest level these provide indications of the main questions and dominant meaning of each assessment event for the participants, as well

as global patterns that seem to be taking place. For instance, the dominance of the assessment of E1 by the psychotherapist was first picked up through a global reading of the protocols that revealed her setting of the agenda for most of the discussion, albeit in subtle ways.

However, some general impressions are also formed during detailed analysis of the transcripts, when particular statements give rise to hunches on the important larger meanings a particular sequence of interaction or happening had for a particular participant. For instance, the legal accountability factor in M2 was a latent phenomenon in the protocols that was, however, picked up through little indicators spread in the assessment protocols and post-assessment interviews.

These holistic views can become an explicit part of the analysis by being recorded as they occur. It is thus important to register hunches through systematic **memos** on striking features of the transcript that come to mind during coding. The use of ATLAS/ti software makes this easier because memos attached to particular codes or sections of text can be jotted down during coding, without interrupting it unduly, while at the same time being easily retrievable when and as required and in relation to the sequence and context in which they occurred.

5.7. Validity

A qualitative approach, no less than the quantitative one, has to address the question of validity as an essential issue. If the purpose of research is to give as truthful as possible an interpretation of the world, then validity depends on "the relationship of your conclusions to the world" (Maxwell, 1996). The key concept is thus the "validity threat: a way you might be wrong," or the existence of potential alternative explanations or rival hypotheses for the phenomena

concerned. Any account has to be tested against the evidence on which it is based.

5.7.1. Gathering accurate and complete evidence of the phenomenon

5.7.1.1. Getting complete evidence

The first step to validity is therefore ensuring that the evidence is accurate and complete in regards to the phenomenon under study. This is not easy and often involves trade-offs. In this study, for instance, the aim was to capture an ecological phenomenon. In the attempt to avoid participant reactivity to the research, it was essential to avoid as much as possible any interference with the usual procedures. Thus choice of cases was negotiated with the managers within the main criteria of cases within the autistic spectrum that were being assessed at the particular Site for the first time. This effort led to some restriction in the choice of cases - very complex cases may have been ruled out by the director at Site M. The attempt not to interfere with procedures also created difficulties with getting an accurate and clear recording of all the discussions which occurred in different rooms. Non-interference was also another reason for giving up video recording with which participants felt uncomfortable. But it is understood that these limitations were compensated by the collection of evidence that was highly naturalistic, which was a main criterion for this study.

Getting a more complete evidence for the phenomenon was also ensured by triangulation of sources of evidence: this included the discussion protocols, the interviews with each participant including the parents, and the written referrals and evaluation reports.

It was then essential to get complete and accurate recording of the transdisciplinary assessment evidence. Video recording, though itself still

limited to the focus of the camera, would have been the most desirable way of ensuring accurate evidence of both the non-verbal and verbal protocols. As this was not possible, an effort was made to capture clearly on audio-tape all the discussions occurring on the assessment day relevant to the case evaluation. This aim was communicated to the participants. In this way, at Site M for instance, despite the difficulties in organising the recording, the initial centre level briefings on each case were recorded, one preparation discussion for assessment was recorded, two post-assessment reflective interactions were recorded. Similarly at Site E, apart from the formal discussions, the informal observations of the professionals during the assessment were also recorded. While ensuring accurate recordings, the author also observed and took notes on the proceedings. With regards to the interviews, the search for 'truthful' accounts during interviews has been explained in chapter 4.

5.7.1.2. Accurate transcription

The next important step was ensuring an accurate transcription of the recordings. These involved careful, very time-consuming listening to the recordings. The purpose of the research did not require detailed transcription of intonation, pauses etc that are common to conversation analysis. However, during analysis, any doubt about the interpretation of a particular word or phrase or sequence of interaction was checked against a rehearing of the tape.

5.7.2. Ensuring valid interpretation

The next essential step was ensuring a valid analysis and interpretation of the data. Qualitative analysis has been especially criticised for relying on subjective interpretation. However, a rigorous approach ensured that interpretations were objectively validated.

5.7.2.1. Use of the complete data

First of all, the detailed protocol analysis made use of the whole assessment transcripts. This eliminated one of the main threats to credibility in qualitative research, namely the doubt as to "whether the researcher has selected only those fragments of data which support his argument" (Silverman, 1993, p.162).

5.7.2.2. Triangulation of evidence to ensure empathic reading

Secondly, triangulation of evidence on the same phenomenon ensured a more empathic reading of the data: in the sense of attending to actor intentionality and seeking to understand the actor's frames of reference and value commitments (Stake, 1995), rather than imposing the investigator's own views. This was achieved by:

- firstly, trying to seek evidence of interpretation within discussion protocols, i.e. in the interlocutors own interpretation of previous turns in the discussions;
- secondly, seeking evidence on the same phenomenon across the different phases of the assessment, as well as in the interviews with each participant and in the documentary data;
- thirdly, including more than one assessment at each site and more than one case by each professional - in this way, each new source of evidence constituted a check on any interpretation of any other part of the evidence.
- A fourth useful measure that was originally intended, was the member checking procedures - asking participants to check the interpretations made in the analysis. However, this measure had to be ruled out in order to respect confidentiality of the interview data that included individual participants' opinions on other individual members of the group, and the

further complication that not all members of the participating groups were still working together when the analysis was completed.

5.7.2.3. Triangulation of methods

Triangulation of evidence was further supplemented by the use of multiple methods of analysis (cf. Dockrell & Joffe, 1992). Two different approaches to the discussion protocols, based on two different theoretical paradigms (information-processing and discourse analysis), constituted a check on the results of each other.

Similarly, the two modes of reporting the verbal protocol analysis itself, namely that of the sequential goal structure of the protocols together with a conceptual structure of the whole results, also constituted a check on the conclusions reached through the verbal protocol analysis.

5.8. Conclusion

The aims of this study for investigating the frameworks used by professionals in assessment action were best served through two methods of qualitative analysis.

Verbal protocol analysis from cognitive psychology could:

- derive the procedural framework in terms of the sequential goal structure of the assessments and the high level decision-making processes through which the problem was understood and solved;
- derive the knowledge frameworks that were activated in the application of decision-making processes.

Discourse and conversation analysis from sociology could:

- derive the professionals' particular constructions of the assessment task within their particular institutional and disciplinary contexts;
- demonstrate how the turn-by-turn formulation of the problem description, explanation, prediction and recommendations and plans for their implementation was negotiated within the inter-professional and professional-parent group dynamic contexts.

Reliability and validity were ensured firstly through this triangulation of methods applied to the same data. They were further strengthened through triangulation of data sources - discussion protocols and post-assessment interviews with each participant.

Moreover, reliability of the verbal protocol analysis was achieved through a good inter-rater coding reliability check. Reliability of interpretation in discourse and conversation analysis was ensured by tying it closely to interactants' own interpretation of speaker's meaning within the interaction itself.

Chapter 6

RESULTS I: THE REFERRAL PROBLEMS AND THE DECISION MAKERS

6.1. Introduction

The aim of this study was to identify and describe the frameworks used by multiprofessional groups in reaching their judgements and decisions in the assessment of pre-school children with complex developmental difficulties. The results of the verbal protocol analysis, discourse and conversation analysis will be presented in four steps (chapters 6 - 9):

- **Chapter 6** gives a description of the *referral problems and decision makers* in each of the four cases in the study. An account is first given of the referral concerns of the parents and local health or education services in each case. The institutional and disciplinary contexts of the professional groups at the two Sites are then described.

  This is followed by a description in the next three chapters (7-9) of the procedural, knowledge, goal and negotiation frameworks applied by the professionals in the decision-making process in each case and Site.

- **Chapter 7** describes the *sequential decision making process.* It shows how the professionals at both sites engaged in each of the six *task* processes identified in the coding frame: a detailed account is given of the hypothesis-testing process. At each site also, these processes were applied repeatedly in three sequential Cycles of problem solving and decision making within each assessment. Professionals also linked their action to other pre- and post-assessment services received by the child

and family.

- **Chapter 8** focuses on one particular process, namely the *Explaining* process, and on the *knowledge* and *goal* structures of the assessments. It shows how diagnosis was central to decision making at both Sites, and also how the professionals' explanations were developed through the activation of three scientific *knowledge* structures, and other concurrent *goal* structures (client, resource, and legal accountability schemas), and *negotiation* structures.

- **Chapter 9** focuses on group dynamic *negotiation* structures that framed the assessment process. An account is first given of inter-professional negotiation frames that impacted the decision making process. This is followed by a description of how professional-parent negotiation frameworks influenced the formulation of the problem and its solutions.

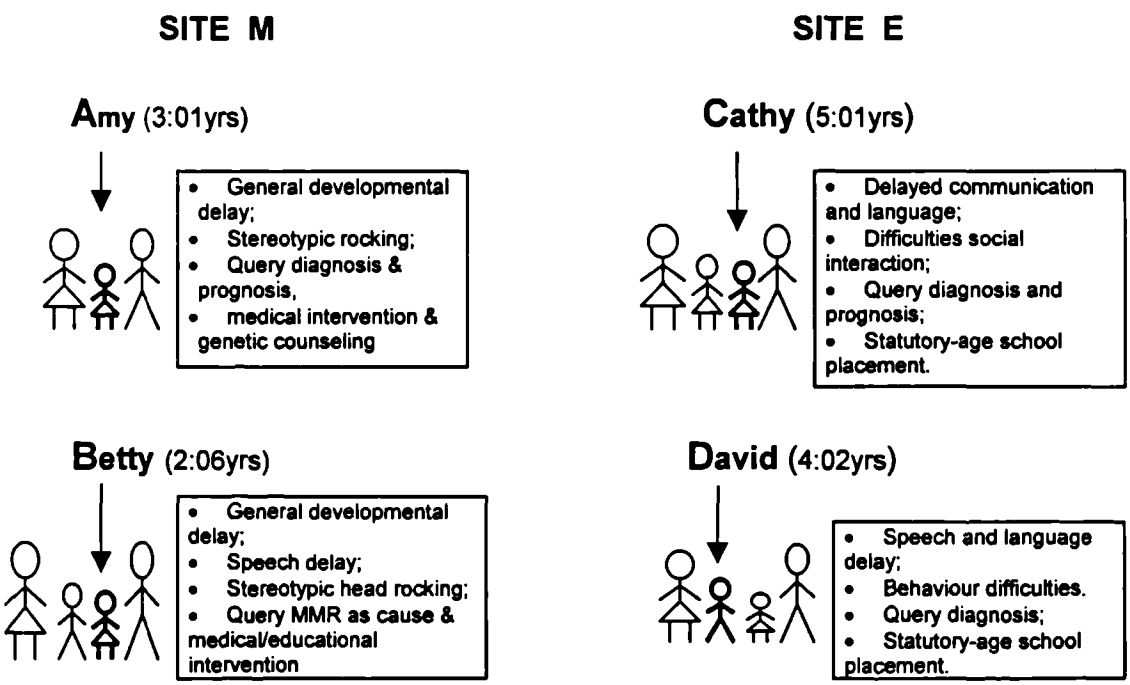
The current chapter starts off by describing the context of the naturalistic decision making process in two sections. (1) It first sets out the presenting problems, namely the referral concerns of the local paediatrician and of the parents in the two cases at Site M; and those of the EP and nursery staff and of the parents in the two cases at Site E (see Table 6.2.5b, below p.195, for the basic data on each case). (2) This is followed by an account of the main characteristics of the groups of professionals who conducted the assessments at the two Sites, describing both their institutional set-up as a group and their individual orientations (see Table 6.3.1, below p.196).

6.2. Referral concerns of the four cases in the study

This study is based on the assessment data on four preschool children with complex developmental difficulties and their families (see Figure 6.2 below). Two were referred by the local paediatrician for a second specialist opinion at Site M, a tertiary neurodisability centre; and two were referred by the educational psychologist for multidisciplinary assessment at Site E, in view of the perceived need for Statementing for special educational needs.

Figure 6.2: The four children by Site, family composition and referral concerns

(Note fictitious names with initials in sequential order of presentation as a memory aid: Amy & Betty (Site M1 & 2); Cathy & David (Site E1 & 2)).



6.2.1. Case M1: Amy, referred for a second opinion

Amy was a healthy, mobile 3-year-1-month-old girl with general developmental delay, no spoken language, and stereotypic rocking behaviour.

Local services concerns

Amy had first been assessed by the Consultant Pediatrician of the Community Child Health service and by a speech therapist at the age of two. She had failed to engage in the tasks presented. The speech therapist reported "Short attention span, loses interest quickly, ... dropping things on the floor, putting them in her mouth. Took things out of containers ... banging things together." She had concluded that Amy had a "serious problem with non-verbal and verbal communication as well as with social communication," and that these appeared to be part of "an overall developmental problem".

The paediatrician had informed the parents that she "needed notifying for special needs". Amy first went through Portage teaching, and then started attending nursery with one-to-one support, where she had "progressed a hell of a lot" (F in M1Prot.e). She had also been referred to music therapy. Amy also had audiological testing, which was reported normal, and vision testing which was due for review when the Site M assessment took place.

The pediatrician referred Amy to Site M for a *second opinion* on the insistence of the parents. She asked for a more specific indication of the child's level of difficulty, including the implied issue of whether her difficulties were within the autistic spectrum. She had also informed the parents, who were first cousins, that arrangements for genetic counseling would be made by Site M..

Parental concerns

The parents were an enterprising, articulate and assertive couple from Pakistan who were well integrated in the UK. Following the pediatrician's "bad news", they had asked for a review by a specialist centre, and started shopping around for services. They took Amy for homeopathic therapy where they had been told that her difficulties might have been caused by the antibiotics the mother had taken while breast feeding. They had also been intrigued by articles in the newspapers talking about a new treatment with high levels of oxygen which "worked miracles" for "severely brain damaged children".

They accumulated a number of questions for the professionals at Site M. They had already decided their child was not autistic, but were asking for specific indications of her level of difficulty and prognosis. They came with conflicting feelings: they "recognise she is delayed but are unsure about her progress" (referral letter). F presented his daughter as functioning below 'normal' expectations, but immediately then queried the meaning of 'normal':

> F: ... Somehow she's coping; but she's nowhere near the normal. I don't know what is normal ... (M1Prot.b)

The parents still harboured the hope that the child might "catch up". They were searching for any possible medical interventions:

> F: What we really wanted was a second opinion, em, to what Dr X [local paediatrician] said; whether she'll write, whether there is something else that could be done for her medically ..... (M1Prot.b)

Both parents were also asking for an explanation and possible ways of dealing with their child's stereotypic rocking.

6.2.2. Case M2: Betty, referred for diagnosis

Betty was a healthy, active 2½-year old child, with general developmental delay, no spoken language, difficulties with social interaction and severe rocking before going to sleep.

Local services concerns

Betty had been first seen by the local paediatric team of the Community Child Health service at 1 year 10 months. The Senior Clinical Medical Officer [SCMO] found her "delayed developmentally", with developmental assessment scores of between 3-5 and 18 months.

In contrast to Amy's case, Betty had received no individual support by the time of the Site M assessment, eight months later. The parents had one home visit by an early intervention educator, and they started attending an "opportunity group" for toddlers with special needs. They were also referred to music therapy which was due to start after the Site M assessment.

The SCMO had referred Betty to Site M "to investigate the problems and give your opinion about management". She did not give any specific opinion herself, but mentioned mainly behaviours associated with autism: "Betty is in a world of her own and mostly silent ... did not demonstrate constructive play, but likes to spin plates, or wonder round touching furniture, and objects. Likes music." This SCMO was regarded by Site M professionals as referring too readily to them before carrying out appropriate intensive investigations and arranging for support locally. In a telephone contact after the assessment, she gave the impression to the Site M speech therapist that she was referring cases because "she found giving autism diagnoses difficult in children so young," and because the Site M report would get local services moving more easily.

The SCMO also referred the parents' question as to whether Betty's difficulties had been caused by a bungled MMR immunisation at 12 months. She had suggested the child's reaction had been "unremarkable", but again referred the parents to "discuss the issue directly with you [consultant neurologist]".

Parental concerns

The parents were an articulate and assertive English couple. The father was a solicitor. Their older son had received a short period of speech therapy for articulation difficulties. Father's cousin had a child with autism but they did not see Betty at all in that category.

These parents were angry at the SCMO for cancelling her second appointment three times. They also attributed to her the delay in getting their appointment at Site M, noting how the letter was sent three months after the local assessment. No collaborative support network had yet been established locally. Site M professionals attributed this initially to inadequate local services, though later also thought it might have been caused by resistance from the parents.

These parents did not see their child as developmentally disabled. They had seen "quite significant improvement" since her first assessment especially in areas related to autism: "eye contact .. has gone fantastically. ... And she's a terribly affectionate child" (F in M1Prot.b). Mother had been put off by the "Mongols and autistic children" who attended the toddler group.

Mother attributed Betty's difficulties to a regression caused by the MMR immunisation which to her seemed remediable through medical intervention. The parents hoped Betty would "catch up". The assessment at Site M was seen mainly as a hospital check up, including a number of tests that would

lead to a pronouncement by the consultant neurologist about the cause of the child's difficulties.

As in the case of Amy, they were also concerned about Betty's severe rocking before going to sleep: "a habit which everybody tells us, is held as bizarre, but I suppose is normal" (F in M1Prot.b).

The parents did not show much concern about a 5-minute convulsion Betty had four months previous to the Site M assessment. They had been told it was a febrile convulsion.

6.2.3. Case E1: Cathy, referred for statutory (special) school placement

Cathy was a healthy, calm 5-year-1-month old with difficulties in "communication and language" and social interaction.

Educational psychologist's (EP2) & nursery staff concerns

Cathy was referred to Site E by an experienced Educational Psychologist (EP2) who had previously been head of school. He had discussed the case with his supervisor – EP1 – who was also the originator of the Site E set-up. The case had been referred through the usual system of the Pre-school Special Needs Panel.

EP2 had been involved with the case when the child was four years old. He had then tried to get a placement for Cathy at a social-services funded nursery with a unit for children with special needs, but found that the mother had already made the arrangement herself through social services. He became involved again as the child was now overdue for statutory schooling. He had already seen the child again at the nursery, and the parents had already given their consent for statutory assessment for special needs.

The educational psychologist (EP2)

EP2 referred Cathy to Site E mainly to get her *an appropriate placement.* He had given the green light to the parents' option for a particular special school. The deputy head of that school - (A) - was to be at the Site E assessment, but she was known to have "very single minded opinions about who comes and who is suitable [for her school]" (E1int.EP2). So he had talked to A briefly about the child previous to the assessment but he would not suggest she should take the girl to allow her to decide for herself.

EP2 also intended to use the Site E assessment to provide *more informed advice to the parents* about their questions regarding the diagnosis and prognosis for the child's difficulties.

The nursery teacher (T1) and speech therapist (S2)

There were *no nursery concerns* about Cathy. Both her teacher and speech therapist in the same agency were happy with the way they were supporting her development. They and the head of nursery attended Site E as contributors to the Statementing process rather than for their own concerns.

There were also *logistic concerns* in Cathy's case. It was the first case after a six-month break and was being held in a new location, inside a refurbished special school. The originator of the Site E assessment system was thus also very concerned with relaunching the system appropriately and getting the logistics right.

Parental concerns

Cathy's parents were a shy couple from Thailand. Though mother had some difficulty with English, she was almost the sole carer of Cathy and her elder sister. She had "some sort of nursing background [which] ... was important in the sense that it shows that she may not have been over nervous of approaching various professional bodies." (E1int.EP2). She also had a friend

from Thailand who worked in social services.

Mother had serious guilt feelings about her daughter's difficulties. No problems had been noted in Cathy's infancy. Difficulties were noted by her sister after Cathy was sent to Thailand at 1 year 3 months while her mother was helping father with a restaurant business. There Cathy did not respond to being called and played on her own. On assessment in Thailand, her hearing was found to be normal and a doctor had told her the child was autistic. Mother brought Cathy back after 20 months and was trying to build an interaction with her gradually.

Cathy's parents had come to the assessment thinking that they were mainly going to be shown around the school where their child would be attending. This was a priority for mother since father was going to Thailand, and she wanted a school that was close to her house. The special school where the Site E assessment was held was thus appropriate for her in terms of location too.

6.2.4. Case E2: David, referred for statutory (special) school placement

David was a healthy 4-year-2-month-old boy with "speech and language delay, and also certain behaviours that the nursery started to be concerned about" (E2Prot.b).

Educational psychologist's (EP3) and teacher's (T2) concerns

David had had several medical and developmental assessments from local services from the age of three, but these were all fragmented with different professionals and at different hospitals. His diagnosis as "displaying many features of the autistic syndrome" had only been given in the week before the Site E assessment. Meanwhile David's difficulties had become a pressing

problem within education because of his disruptive behaviour at the nursery. He was in fact only attending for two hours a day.

The nursery teacher (T2)

The promoter of David's referral for Statementing was his nursery teacher (T2). She did not have the skills to meet his needs and he was interfering with her teaching of the rest of the class: he initially refused to be with the other children, and engaged in constant repetitive behaviours, such as throwing blocks and pencils in the air and watching them come down. She first sought advice within the school. Another teacher told her the child "was autistic" and would need special schooling. She obtained the mother's consent to start the Statementing process for David's support. Within three months, she had arranged for him to be seen by a special needs advisor (the school special needs coordinator was inexperienced), and then the educational psychologist, as well as for speech therapy assessment. She had been told that it was necessary to push for provisions as otherwise they would take a long time.

The educational psychologist (EP3)

The educational psychologist (EP3) who saw David at the nursery and met the parents then referred him for Site E assessment. She was in her first year on the job and David was also the first child with autism she had come across. While suspecting David's difficulties were within the autistic spectrum, she still could not decide without other professional opinion. Her supervisor was also cautious about applying that diagnostic label. Despite the push from the school, and her writing of a Stage Three *Code of Practice* report on his needs, she referred him for the Site E assessment in order to clarify what his needs were. She would then write a Stage Four report for his Statementing.

The clinical psychologist from health (C2)

David's family had also been referred to a clinical psychologist (C2) in the health service. She was a family therapist and had had three sessions with him and different members of his family. She too was still in the process of

writing a report about him, but had found difficulty in continuing support for the family, allegedly because the family itself was resisting identification of the problem. Two months had elapsed from her last appointment with this family. She was surprised the teacher had succeeded to move David's case so quickly, and she came to the Site E assessment "to see what was happening with this family," and also to raise her concerns about his younger sister's language delay and behavioural difficulties.

Parental concerns

David's parents, immigrants from Nigeria with no connections in the UK, had been worrying about their first child since he was around 1 year 8 months. He had had a regression in play and vocalisation. But they had only referred him to health services after the age of three because the mother had insisted he would be a late talker like herself. The couple did not see eye to eye about the child's needs. Father was significantly older and had been in London for 20 years while the mother had come over 8 years previously. Father believed in getting support through the system. Mother was more reluctant to accept him as having a disability.

However, she was now compelled to seek special provisions: "He only goes to the nursery to spend two hours, and this is not good for him" (M in E2Prot.e); "We just needed help for the boy but we are not getting it" (M in E2int.M&F). Thus, the parents, led by the teacher, were both asking for special schooling, though mother still harboured a wish for him to be supported in mainstream.

These parents also had concerns about what was "wrong" with their child. Mother, who had diabetes, had guilt feelings that her condition might have caused his difficulties.

6.2.5. Summary of referral concerns by client and Site

A look at Tables 6.2.5a & b, below, shows that the four children in this study were manifesting similar developmental difficulties: developmental delay, lack of speech, difficulties with communication and social interaction, and stereotypic or repetitive behaviours. Yet, different specific referral concerns were presented.

Some of these differences were related to *the differences between the two major clients*: parents and local support services. Three concerns were central to the parents:

- Amy's and Betty's parents' search for a medical cure and worry about stereotypic behaviours were not shared by their respective local services.

- Cathy's and David's parents' concerns with the personal implications of the diagnosis and prognosis were seen as side issues to the administrative concerns of the educational support services.

- Betty's and David's parents' had pressing concerns for getting individualised educational provisions which were not felt by Amy's and Cathy's parents who were already receiving specialised education and speech therapy support.

On the other hand, differences in referral concerns were also related to the *perceived functions of the two Sites*:

- In Amy's and Betty's case, the parents and local services shared a referral concern with diagnosis and prognosis and medical investigations.

- In Cathy's and David's case, the parents and support services shared a concern about school placement.

The next section will show how these two different referral expectations were matched with different institutional and professional goals adopted by each of the two Sites.

Table 6.2.5a.
Main referral concerns of parents and of local services by category and case

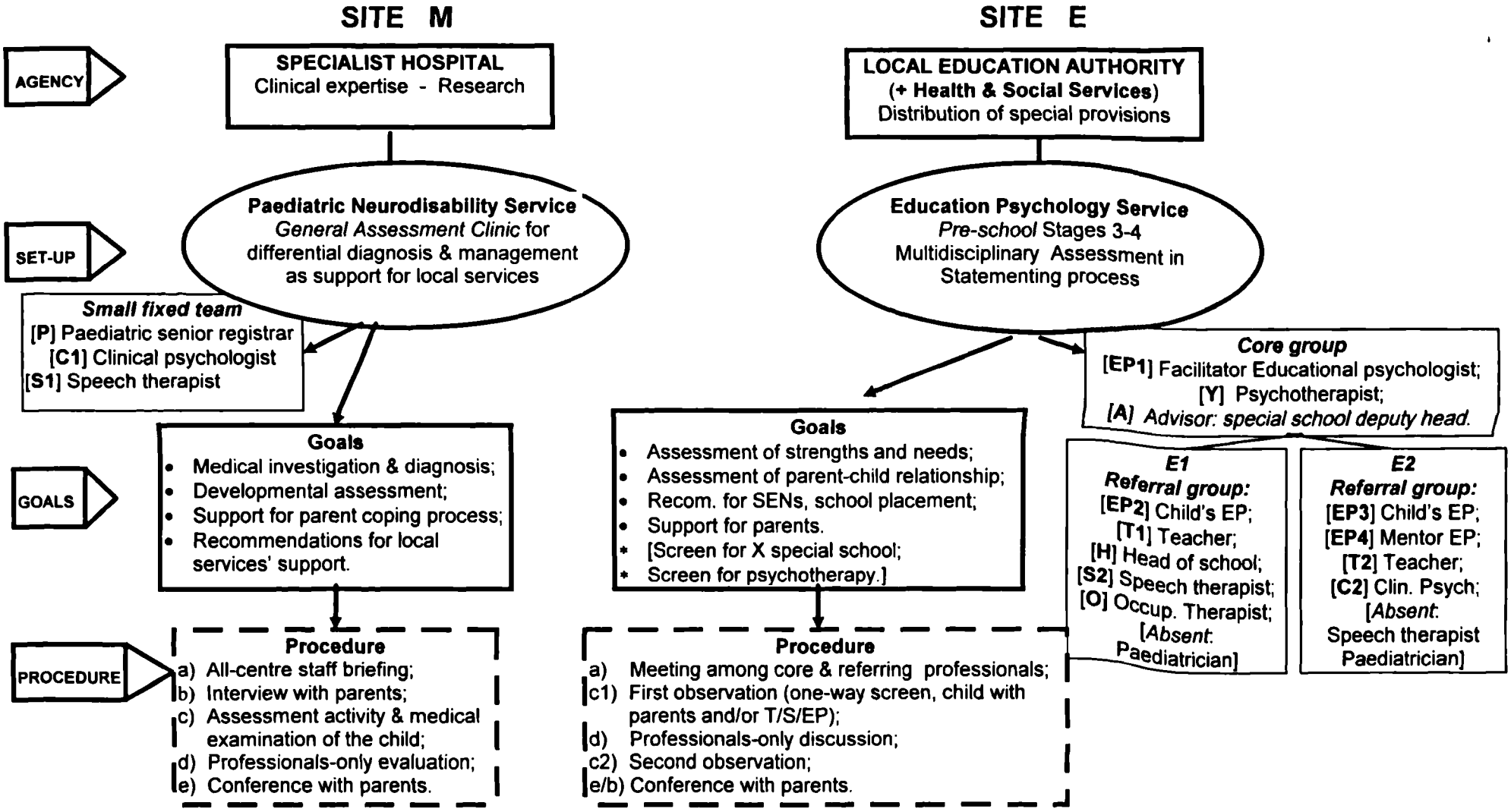
EXPLICIT REFERRAL CONCERNS	Amy: *Concerns of*		Betty: *Concerns of*		Cathy: *Concerns of*		David: *Concerns of*	
	Parents	*Local Services*	*Parents*	*Local Services*	*Parents*	*Local Services*	*Parents*	*Local Services*
Impairments causing concern:								
• **Dev. delay;**	✔	✔	✔	✔	✔	✔	✔	✔
• **No speech;**	✔	✔	✔	✔	✔	✔	✔	✔
• **Difficulty with comm. and social interaction**	✔	✔	✔	✔	✔	✔	✔	✔
• **Stereotypic / repetitive behaviour**	✔	✔	✔	✔	✔	✔	✔	✔
• **Behavioural difficulties**							✔	✔
Diagnosis and prognosis	✔	✔	✔	✔	✔	+	✔	+
Medical investigations	✔	✔	✔	✔				
Medical intervention	✔		✔					
Daily management strategies	✔		✔	✔			✔	✔
Special provisions			✔	✔			✔	✔
School placement					✔	✔	✔	✔

+ An implicit concern as a means to resolve other concerns

Table 6.2.5b: Main characteristics of each of the four cases

Characteristics	Case M1: Amy	Case M2: Betty	Case E1: Cathy	Case E2: David
Child age	3:01 years	2:06 years	5:01 years	4:02 years
Child sex	f	f	f	m
Birth order	Only child	Younger of 2	Younger of 2	Elder of 2
Cultural background	Immigrants from Pakistan, integrated in UK M&F shared approach to child Assertive & articulate.	English M&F shared approach to child Assertive & articulate	Immigrants from Thailand M almost sole child carer Shy & difficulty with English	Immigrants from Nigeria Different approaches to child by M&F Shy & difficulty with English & system
Background medical factors	First cousins; Antibiotics during breast feeding	F's cousin had child with autism; Reaction to MMR injection; Febrile convulsion at 2:02yrs		Mother had diabetes; Mother late talker
Current services	Satisfactory full-time placement in nursery with 1-to-1 support and speech therapy advice; Private homeopathy.	Unsatisfactory special needs toddler group	Satisfactory full-time placement in nursery with special unit; Speech therapy	Unsatisfactory 2-hours-a-day in mainstream nursery
Referral problems	General developmental delay; Stereotypic rocking; Query diagnosis & prognosis, medical intervention & genetic counselling	General developmental delay; Speech delay; Stereotypic head rocking; Query MMR as cause & intervention	Delayed communication and language; Difficulties social interaction; Query diagnosis and prognosis; Statutory-age school placement.	Speech and language delay; Behaviour difficulties. Query diagnosis; Statutory-age school placement.
Diagnosis	Severe learning difficulties but not one of being autistic	Significant developmental delay; difficulties within the autistic spectrum	Severe language delay; features within the autistic spectrum; behaviour may have originated from change and separation in early life	(Implicit) Severe learning difficulties and autism
Recommen-dations	*Medical*: Audiological monitoring; Investigation with chromosome, fragile X, metabolic studies; Genetic counselling; *Learning:* Continue nursery with speech & language therapy advice; Makaton signing & allow time for responding.	*Medical* Audiological testing; Investigation with MRI, EEG, chromosome, metabolic studies; Rev. by Consultant neurologist. *Learning:* Small group nursery; Makaton signing & pick-up any communicative cues; Review in 12 months.	*Learning*: Report for Stage 4 Statutory assessment for: Special school for children with communication difficulties & behaviour within autistic spectrum; Regular speech and language therapy; Access to family therapy and individual counselling.	*Learning*: Initiate Stage 4 Statutory assessment for: (Implicit) Special school for children with autism; Regular speech and language therapy.

Figure 6.3.1: Institutional and disciplinary contexts of Sites M and E



6.3. Institutional and disciplinary contexts of Sites M and E

6.3.1. Introduction

This section describes the professionals' decision making context in terms of (1) the assessment agency institutional context; (2) the particular set-up within the agency of the professional group carrying out the assessment; (3) the goals and orientations of the professionals as a group and within their individual disciplines; and (4) the procedural structure of the assessment (see Figure 6.3.1, above).

6.3.2. Institutional context: Different agencies and functions

The two Sites had a different institutional context: Site M belonged to a single-agency hospital set-up; Site E was organised by a branch of the Local Education Authority but included a multi-agency grouping (see Figure 6.3.1, above).

6.3.2.1. Site M

Site M was one subgroup in a flexible grouping of around 10 professionals forming a tertiary "General Assessment Clinic". This was one of eight clinics in a paediatric neurodisability service, which was in turn a branch of an established specialist London hospital.

Multidisciplinary teams

Site M was multidisciplinary. Teams in the General Assessment Clinic consisted usually of a paediatrician, clinical psychologist and a speech therapist.

Functions

This clinic served "children with complex combinations of impairments" at a *tertiary* level: "to support local child disability teams in their work with children and families" (Site M Service Specification). Its work was accountable in two ways: (1) It had to provide clinical expertise in differential diagnosis and management of early childhood disability to complement and support district child development teams. Thus in its search for improving the quality of its service, it was monitoring its relations to its two clients - local services and parents. (2) Secondly, the centre's service was also influenced by a research agenda. The clinical director felt they were more inclined towards the clinical service than to research, since they tried to meet the specific assessment requirements of their clients at the expense sometimes of not collecting enough information that was required by research. But the centre's "bosses" expected "a very close link" between clinical work and research. Most of their service was justified in terms of research projects on particular client populations.

Referrals

Over a two-year period, the eight clinics had seen about a 1000 cases. Referrals were made to the neurodisability service generally or to particular members of the clinics. They were vetted by a group representing the various disciplines and, if accepted, assigned to a particular clinic and team.

Site M referrals (for the "General assessment clinic") consisted firstly of children "who have a combination of mild to moderate impairments," with concerns about "behavioural management, special educational needs, and ways of developing physical co-ordination or communication skills". Another large group was "referred early for differential diagnosis of language disorder versus a developmental disorder in the autistic spectrum" (Site M Service Specification).

6.3.2.2. Site E

Site E, on the other hand, was resourced within the legal framework of the Stage 3 Education *Code of Practice* procedure. Its referrals were managed by the LEA multidisciplinary Under-Fives Panel.

Multi-agency

It was an initiative of the Educational Psychology Service, who chaired the assessments, but set up in collaboration with Health and Social Services. It was essentially multi-agency: all professionals involved with the child were invited to the assessment. Thus apart from the EPs, these included paediatric personnel, a psychotherapist from the Child and Family Service, speech therapists, occupational therapists, and the receiving Special Schools.

Functions

It was proposed as "a multidisciplinary assessment technique" to provide advice to pre-school support services. It had been in operation for five years.

Site E served more than one function: (1) It was mainly intended "to assess the child's strengths and weaknesses and to discuss ways to facilitate progress" (EP1 Formal Paper). This could include a recommendation that special needs would be met in a special context, and its discussions could form part of "the compilation of a Statement of Special Educational Needs." (2) A secondary explicit function was the screening by the Child and Family Service for possible referral for psychotherapy. (3) A third unofficial function was for the special school representative as a member of Site E to screen for the child's suitability for her school, which included a unit for children with autism and an observation and assessment unit.

Referrals

One assessment was held approximately every month. About 50 assessments had been held over its first four years.

Site E referrals were about children "who were causing concern by presenting an unusual or complex pattern of early childhood development, puzzling to both parents and professionals" (EP1 formal paper). In fact, of the first 53 children referred to Site E, around 45% had "autistic traits" or "complex difficulties", another 45% had developmental delay with learning, social, behaviour/emotional or a medical condition, and the rest had communication difficulties (EP1 formal paper).

6.3.3. A Site M team and a Site E multiprofessional group

6.3.3.1. The Site M team

The Site M team was made up of three professionals: a paediatric senior registrar **[P1]**, a consultant clinical psychologist **[C1]**, and the chief speech and language therapist **[S1]**. C1 was clinical director of the centre and was the official chair and held highest status in the team. They were a closely knit team: C1 and S1 had worked together at the centre for 10 years, and P1 was at the end of her period of training with them (her eighth month) in developmental assessment. They shared roles, being at one time chair and another time note taker. A formal chair might be indicated for parent meetings.

As a form of internal support, cases being assessed by this team and two or three other teams in the "General assessment clinic", were presented briefly for comments to all clinic staff in a pre-assessment 10-minute briefing. Each team then went about its own assessment. Three to five hours were allocated for each assessment.

6.3.3.2. The Site E group

The Site E group was made up of two distinct subgroups (see Figure 6.3.1, above): (1) a more permanent *core group* consisting of the educational psychologist who originated and supervised the process [**EP1**], a psychotherapist [**Y**], and an advisor on special educational provisions [**A**] who was deputy head of a special school; and (2) and a case appropriate *referral group* of professionals already working with the child and family. While core members attended regularly, the referral group changed according to the professionals who were involved with the child.

The system depended on multi-agency collaboration. No paediatrician turned up for the two assessments in the study. A paediatrician at one of the observed cases commented on the Site E assessment as a "luxury"; they had difficulty finding the time to attend. They attended two of five cases observed, though they used to attend more often in the first years of the initiative. Speech therapists were usually involved with these children and attended regularly: their opinion was appreciated as being based on expert work with the child over time. However, in David's case, no speech therapy sessions had yet been held and the assigned therapist excused her absence "because it was her day off". The assessment was called by the Educational Psychology Service and held at a special school.

6.3.4. Different group and individual assessment goals

The assessment goals, as well as the demands made by referral agents seeking the service, were different for each Site, reflecting the different institutional contexts and different professional arrangements (see Figure 6.3.1, above).

***Site M** was intended to offer mainly a second specialist opinion* when district child development teams were either unsure about the nature of the child's disability or needed specialist intervention. Thus:

- Most referrals were made by the local paediatrician and often required neurological investigations. Referrals were rejected if they only involved an educational issue, such as dyslexia or determination of special educational needs. The team had no links with LEA's to arrange for special educational provisions.

- In relation to this diagnostic function, a main objective of Site M was "to counsel families on the implications of the diagnosis" (Service Specification)

***At Site E**, the main goal was to provide a multidisciplinary forum* for parents, teachers and professionals in the early identification of children's special educational needs, and in this way to "facilitate resources" (EP1 formal paper). Thus:

- Most referrals were made by the Educational Psychologist while a few others were referred by individual medical personnel and speech therapists. Most children (68%) in the first 53 cases had subsequently moved on to Stage 4 and 5 of the Statementing procedure. No evidence of referrals for medical investigations was found.

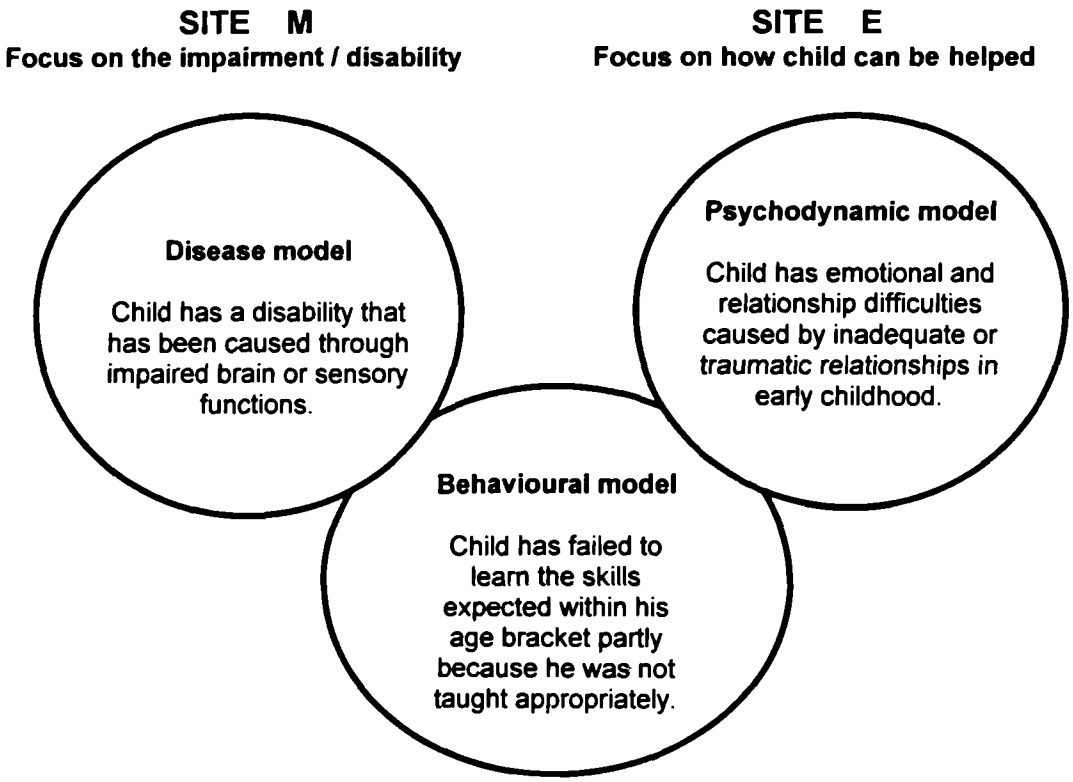
- Moreover, at Site E there had been a strong influence from the psychotherapists of the Child and Family Service from the beginning. These not only provided a psychodynamic perspective to the assessment within the main aim of the Statementing process, but also used the Site E assessment as a screening device to determine if a child and family would benefit from psychotherapy.

- Similarly, the deputy head of a special school, while providing input on special educational provisions, had also used it regularly to determine if a child was suitable or otherwise for the special provision of which she was in charge. At the time of this study her school was for children with moderate learning difficulties and included a unit for children with autism, and an observation and assessment unit.

6.3.5. Three main individual professional orientations

The above different goals were also reflected in the contrasting orientations of the professionals at each Site. Three major different models of disability were espoused by the professionals at Site M and the core group at Site E (see Figure 6.3.5, below).

Figure 6.3.5: Models that characterised the two Sites



Though all professionals recognised to some extent the contribution of each model to the understanding and support of children with disability, the above figure points out how the *disease* model was more characteristic of the shared model at Site M, while the *psychodynamic* model was more characteristic of the core group at Site E. The *behavioural* model was embraced by both groups.

6.3.5.1. Disease model at Site M

At Site M the importance of the disease model was underlined by the indispensable presence of the paediatrician. The medical history, neurological examination and consideration of previous and subsequent medical investigations constituted a main part of the procedure of the Site M assessment. The three professionals shared the medical perspective that searched for a physiological explanation for the disability.

Given that no medical treatment was available for disability even if a cause was diagnosed, the disease model implied that the problem was long term and had no cure. The psychologist and speech therapist thus shared a strong professional concern for supporting the parents in coming to terms with the implications of permanent disablement. The presence of the psychologist and speech therapist led to the topping of the disease model with the behavioural model, with a focus on a search and recommendations for supporting the child's progress within the constraints of his or her impairments.

6.3.5.2. Behavioural and psychodynamic models at Site E

At Site E the departure from the disease model was evidenced by the fact that the Site's main goals could be achieved even in the absence of

medical personnel. The disease model was seen as useful to indicate any medical conditions and needs of the child. But this was only regarded as a background factor to their focus on educational and therapeutic ways of supporting the child.

The behavioural model

EP1 and A followed the *behavioural* model. They were mostly concerned with the skills the child had *learned* or failed to learn in comparison to children of his or her age or with inappropriate behaviours that needed to be changed. They were focused on specific observable behaviours performed by the child. They would then suggest ways of changing undesirable behaviours, or supporting the acquisition of new skills towards normal functioning through the provision of appropriate management, special educational support and placement.

The psychodynamic model

The psychotherapist's (Y) *psychodynamic* perspective entailed a focus on the child's emotional development with a search for past and current relationship experiences. Thus difficulties exhibited by children with characteristics within the autistic spectrum were seen by Y as distorted coping mechanisms developed in reaction to inadequate early relationships. If these children were helped in early childhood to experience more adequate supportive relationships to compensate for traumas suffered in infancy, many of them might regain normality:

> I wonder whether a lot of the children who suffer from speech communication disorder and developmental delay, suffer from just that, and if not given the appropriate help it goes on to become autism. (E1int.Y)

This perspective had the support of the other two core members. EP1 recognised Y's psychodynamic view as different from her own skills-based behavioural perspective, but had a deep appreciation for the expertise and usefulness of Y's approach. And Y herself saw A's practice as very much in line with her perspective:

> Y: ... I think a lot of the autistic units feel the child is autistic, they can't be helped. A's view, I think, is that the child can be helped to develop a relationship, and I think that's why it is possible to get somewhere with the children. (E1int.Y)

Thus, in contrast to the Site M focus on helping the parents cope with the child's "permanent" disability, the Site E focus was on the possible inadequacy of parents (and/or of teachers, facilities) that could be corrected through the provision of psychotherapy and appropriate educational strategies and provisions.

The above espoused models were built on general comments made by the professionals in post-assessment interviews. The implications of these different models for decision making in each assessment will be described in the next three chapters.

6.3.6. Assessment procedures and management of group dynamics

6.3.6.1. Similar transdisciplinary procedure

Both Sites used a transdisciplinary assessment procedure (see Figure 6.3.1, above):

- The child and family were assessed by all professionals jointly and simultaneously over half a day;

- Assessment activity occurred in the presence of the parents;
- While the parents, or one or more of the professionals, engaged the child in play or on structured tasks, the others observed while in the same room (Site M) or from behind a one-way screen (Site E);
- Some discussions were held among the professionals only, while others also included the parents.

The structuring of the transdisciplinary procedure at the two Sites, however, was different in important ways:

With regards to initial referral information:

- At Site M, this was obtained directly from the parents at the beginning of the session;
- At Site E, however, this was obtained from the professionals working with the child.

With regards to assessment activities:

- At Site M there was a one-hour interactive session between the professionals and the child in the presence of the parents. Each professional interacted with the child, and P conducted a medical examination of the child (including vision and/or hearing tests).
- At Site E there were two shorter (25 minutes) observation sessions in which only the parents and other persons already involved with the child participated, while the rest observed from behind a screen. There was no medical examination of the child.

6.3.6.2. Different management of group process

Site M was a single agency, small, fixed team. Site E was a multi-agency, larger, changing group. This was reflected in the organisation of the chairing of the two Sites:

- The Site M group had no fixed chair, though one particular member would take responsibility for contacting the parents. All professionals were engaged in ensuring that the shared aims of the assessment were met in each discussion. Formal chairing was flexible and required only for the meetings with the parents. Senior registrars in training were initially asked to observe the chairing by the psychologist or speech therapist and towards the end were given more opportunity to chair the parent meetings. Chairing was also related to the main area of concern: the paediatrician if it was bio-physical, the psychologist if it was cognitive functioning, the speech therapist if it was communication impairment. Decisions were reached by consensus. Roles were swapped: while one person talked or interacted with the child, the other members wrote notes for her. The written reports too were flexibly shared among the professionals: a brief one was written at the end of the conference and a full report was sent to the parents and other relevant professionals within a month.

- Site E was chaired by two persons. The formal chairperson was the 'key-worker' psychologist, who usually referred the case, called the meeting, and made use of the assessment decisions in his or her formal report for Stage 4 Statementing procedure. Though sometimes this psychologist might also see to the management of the assessment procedure, it had been found useful to have a "supportive psychologist to be there as a facilitator" of the procedure, while also being another "mind" with a wider view of the case (SiteEPol.EP1). This person was usually EP1, who was the initiator and thus also one of the core-group of professionals who attended regularly: she was the one most

knowledgeable and expert in managing the group process and could take on the chairing whenever she felt necessary. They had also started making use of a secretary to write down a summary of the discussions to be available also for the Special Needs Panel.

6.4. Conclusion

This chapter has shown that:

- *The presenting problems* of the four children were quite similar in terms of different levels of developmental delay, impairments in language, communication and social interaction, and stereotypic or repetitive behaviour.

- However, there were important differences in parent personalities and cultures and levels of understanding of their child's difficulties, as well as in the current level of support from local services.

- *The referral agents and referral concerns* at each Site too were different, with diagnosis as a focus at Site M and special educational provisions as a focus at Site E.

- The Sites also differed in their institutional structures, goals and procedures. This was reflected in contrasting perspectives of the groups of professionals at each Site: the disease model was dominant at Site M, while the behavioural and psychodynamic models were characteristic of Site E.

The next chapter will provide the evidence for how the interaction of referrers' and decision-makers' concerns and perspectives, as well as the

particular dynamics of each assessment process, were combined into a resultant NDM process that was at times similar across cases or Sites, and in other ways unique to each case.

Chapter 7

RESULTS II: SEQUENTIAL PROCEDURAL DECISION-MAKING FRAMEWORKS AT BOTH SITES

7.1. Introduction

The previous chapter gave an account of the presenting problems of the four cases in the study and of the institutional context and individual orientations of the groups of professionals at the two assessment Sites.

This chapter starts reporting the findings on the decision-making frameworks-in-action used by the professionals in each assessment. It focuses on the *sequential procedural* structure of the assessments. The following findings are reported:

- At both Sites the professionals engaged in all the six decision-making *task* processes identified in the coding frame, but differed in the problem areas to which the processes were applied at each Site.

- A goal-driven, hypothesis testing approach was a central feature of decision making at both Sites.

- At both Sites the whole assessment was structured into *three sequential Cycles* of problem solving and decision making.

- Each assessment was also sequentially linked to the longer chain of pre- and post-assessment decision-making events and services for supporting the child's development and parent coping process.

7.2. *Task* processes applied to different problem areas at the two Sites

7.2.1. Process-problem combinations in each assessment

As explained in the methodology, all the protocols were segmented into episodes of problem solving and decision making. It was inferred that in each episode professionals were addressing one subgoal. Each subgoal consisted of either the application of a decision-making process (e.g. DESCRIBE) to a problem area (e.g. Child's communication), or the intertwined application of more than one process to one area (e.g. DESCRIBE and EXPLAIN child's communication).

Six decision-making ***task* processes** had been identified in the coding frame (see #5.3.3.3 above; column 1 in Table 7.2.1, below):

- CONSTRUCT HYPOTHESIS
- DESCRIBE current and past manifestations of problem
- EXPLAIN problem
- PREDICT future manifestations of problem
- RECOMMEND remedial action
- PLAN IMPLEMENTATION of recommendations

The following three **problem areas** were identified in the analysis (see top row in Table 7.2.1, below):

- CHILD EMOTION & BEHAVIOUR area
- MEDICAL area, and
- CONTEXT (family and support services) area.

Table 7.2.1:
Decision-making *task* processes and problem areas identified in the study

PROBLEM AREA / *DECISION MAKING PROCESS*	CHILD EMOTION & BEHAVIOUR	MEDICAL	CONTEXT (Family & services)	
CONSTRUCT HYPOTHESIS				} *See Table 7.2.2a*
DESCRIBE problem & Recommend further investigation				
EXPLAIN problem				} *See Table 7.2.2b*
PREDICT future manifestation				
RECOMMEND remedial action				} *See Table 7.2.2c*
PLAN IMPLEMENTATION of recommendations				

7.2.2. Patterns of process-problem applications

The results of process-problem applications in each case are given in three matrices shown in Tables 7.2.2a-c, below (A list of all the subgoals in each case from which these tables were derived is given in Appendix IV.3, p.).

Each cell in the matrices represents an episode with one process-problem combination subgoal, such as 'DESCRIBE Communication'. The tables also include four separate columns (M1, M2, E1, and E2) for each of the three problem areas: these show the process-problem combination episodes that occurred [✔] in each case, and an indication of the number of such episodes if they occurred more than once. Thus one can get a visual picture of the resulting patterns of process-problem subgoals in each case.

Table 7.2.2a: Occurrence of decision processes by subproblem areas in the subgoals of each case - I: Construct HYPOTHESIS and DESCRIBE problem

SUB-PROBLEM / SUB-PROCESS	CHILD EMOTIONAL & BEHAVIOURAL ASPECTS • Developmental history • Commun. & Social interaction • Repetitive/stereotypic beh. • Emotional & Unusual beh. • Nonverbal functioning • Self help skills	OCCURRENCE (and number of times) in each case				MEDICAL ASPECTS • Physiological • Sensory • Motor	OCCURRENCE (and number of times) in each case				CONTEXTUAL ASPECTS • Family • Support services	OCCURRENCE (and number of times) in each case			
		M1	M2	E1	E2		M1	M2	E1	E2		M1	M2	E1	E2
CONSTRUCT HYPOTHESIS#	Within autistic spectrum?	✔	✔	✔	✔	A has metabolic problem as parents are cousins.	✔				Parents are seeking legal action re MMR.		✔		
	Cognitive level sign. below average?	✔	✔	✔	✔	MMR not cause?		✔			Failed relationships?			✔	✔
											Child for A's school?			✔	✔
DESCRIBE Problem*	Previous findings (Read referral letter/reports)	✔3	✔4	✔	✔2	Family medical background	✔	✔			Family background	✔	✔	✔	✔
	Developmental history	✔	✔4	✔3	✔	MMR incident		✔			Language of home	✔			✔
	Regression	✔	✔		✔2	Convulsion		✔			Sib's development		✔	✔	✔4
	Communication	✔12	✔2	✔5	✔4	Hearing	✔2	✔		✔	Family relationships			✔	✔
	Social interaction	✔3	✔3	✔12	✔11	Vision	✔2				Parent behaviour	✔2	✔3	✔	✔3
	Repetitive/stereotypic activity	✔	✔2	✔	✔2	Motor co-ordination	✔4	✔3			Support services	✔	✔3		
	Emotional / unusual behaviours		✔	✔7	✔12						Educational history	✔		✔	✔
	Nonverbal functioning	✔5	✔3	✔8	✔5										
	Self help skills	✔	✔		✔										
Recommend more investigations/review+	Gen. review of conclusions		✔			Seek/offer MRI-Scan	✔2	✔							
	Occupational therapist assessment			✔		Hearing test		✔3							
	EP to see child again in nursery				✔	Vision test	✔3								
						EEG		✔							
						Medical investigations	✔	✔							
						Tests probably negative	✔	✔							
						Review by neurologist		✔2							
Plan implementation of investigations/review	Gen. review in 12 months		✔			Hearing test		✔							
	EP to see child in nursery soon				✔	Medical investigations	✔3	✔6							
						Genetic counselling	✔								
						Review by neurologist		✔							

✔ Indicates one occurrence of that subgoal in protocols of case; attached numbers indicate number of times >1 subgoal occurred.

#Some hypotheses were only made explicit in the post-assessment interviews.

*A few subgoals that included two intertwined *processes* or *subproblems* were recorded under both: e.g. Describe *Social interaction* and *Communication*; *Describe* and *Explain* motor coordination.

+These recommendations and plans for their implementation are regarded as part of the *description* process since they are intended to discover more information about the problem rather than provide remedies.

Table 7.2.2b: Occurrence of decision processes by subproblem areas in the subgoals of each case - II: EXPLAIN and PREDICT problem

SUB-PROBLEM / SUB-PROCESS	CHILD EMOTIONAL AND BEHAVIOURAL ASPECTS • Developmental history • Communication • Social interaction • Repetitive/stereotypic beh. • Emotional & Unusual beh. • Nonverbal functioning • Self help skills	OCCURRENCE (and number of times) in each case				MEDICAL ASPECTS • Physiological • Sensory • Motor	OCCURRENCE (and number of times) in each case				CONTEXTUAL ASPECTS • Family • Support services	OCCURRENCE (and number of times) in each case			
		M1	M2	E1	E2		M1	M2	E1	E2		M1	M2	E1	E2
EXPLAIN Problem*															
State Cause	Rocking to relieve stress?	✔	✔			Deficit in brain dev.	✔				Overpowering sib		✔		
	Ignoring others deliberate		✔			Antibiotics not cause	✔3				Separation trauma			✔2	
	Repetitive behaviour an unconscious coping mechanism			✔3	✔2	Parents first cousins	✔				Possible separation in infancy				✔
	Child's early non-response extinguished interaction				✔	MMR probably not cause		✔2			Inadequate parenting				✔3
						Birth diff. not cause		✔			Inadequate input				✔
						Search for physiological causes	✔	✔2							
						Vision/walking immaturity	✔	✔							
State Classification	Hearing not major problem		✔												
	Not autism	✔													
	Probably not autism			✔											
	Autism		✔2		✔										
	Autism a rag-bag term		✔	✔											
	Autism & SLD		✔2												
	Patterns of skills - SLD/autism	✔	✔												
	Stereotypy part of SLD	✔													
	Level of functioning	✔	✔2	✔4	✔										
PREDICT problem	Will progress slowly - speak	✔2													
	Will she catch up?	✔	✔												
	Will progress up to next review		✔												
	Getting back to normal			✔											

✔ Indicates one occurrence of that subgoal in protocols of case; attached numbers indicate number of times subgoal occurred, if more than once.

*A few subgoals that included two intertwined *processes* or *subproblems* were recorded under both: e.g. Describe *Social interaction* and *Communication*; *Describe* and *Explain* motor coordination.

Table 7.2.2c: Occurrence of decision processes by subproblem areas in the subgoals of each case - III: RECOMMEND and PLAN FOR IMPLEMENTATION

SUB-PROBLEM / SUB-PROCESS	CHILD EMOTIONAL AND BEHAVIOURAL ASPECTS • Educational strategies • Therapies	OCCURRENCE (and number of times) in each case				MEDICAL ASPECTS • Physiological • Sensory • Motor	OCCURRENCE (and number of times) in each case				CONTEXTUAL ASPECTS • Family • Support services	OCCURRENCE (and number of times) in each case			
		M1	M2	E1	E2		M1	M2	E1	E2		M1	M2	E1	E2
RECOMMEND remedial action	Search for new strategies	✔	✔		✔	No medical solution	✔	✔			Affirm current parent strategies	✔	✔		✔
	Opportunistic teaching	✔2	✔			Hyperbaric oxygen treatment	✔				Sp. therapy support for staff/parents	✔	✔		✔
	Makaton/signs by parents/staff	✔	✔	✔		Homeopathy	✔				Confirm current educ. provisions	✔2		✔2	
	State child's special educ. needs				✔2						Inform local services	✔	✔		
	Speech therapy		✔2	✔	✔						Get local support		✔3		
	Strategies for daily management	✔	✔2								Small group nursery		✔		
	Psychotherapy for family & child			✔2							Special school/nursery placement	✔	✔	✔	✔
											Move to Statutory statementing			✔	✔
											Get provisions for sib				✔
PLAN IMPLEMENTATION remedial action	Speech therapy		✔	✔	✔	Current medical treatment	✔				School placement			✔2	✔2
	Psychotherapy			✔2							Immediate use of local services		✔4		
											Current teacher strategies				✔
											Arrangements for statementing			✔	✔
											Local support for parents		✔2		
											Local service referral system		✔2		

✔ Indicates one occurrence of that subgoal in protocols of case; attached numbers indicate number of times subgoal occurred, if more than once.

*A few subgoals that included two intertwined *processes* or *subproblems* were recorded under both: e.g. Describe *Social interaction* and *Communication*; *Describe* and *Explain* motor coordination.

- Table 7.2.2a presents the application of the two processes of *Constructing a HYPOTHESIS* and *DESCRIBING* the problem to the three problem areas. Note that *RECOMMEND further investigations* and *Plan their IMPLEMENTATION* are included with the *DESCRIPTION* process, since they do not constitute remedial action but rather further search for better descriptions.

- Table 7.2.2b presents the application of the *EXPLAIN* process (*State cause* or *State classification*), and *PREDICT* process to the same three problem areas.

- Table 7.2.2c presents the application of the *RECOMMEND* and *Plan IMPLEMENTATION of remedial action* processes to the same three areas.

The resulting patterns are reviewed below.

7.2.3. Different problem areas at the two Sites

This chapter is focused on decision-making *processes*. However, these processes are better understood if one first takes note of the different problem areas to which they were applied at the two Sites.

Common concern for within-child behavioural aspects

Tables 7.2.2a-c, above, show first of all a big overlap in the concern by the two Sites about behavioural aspects *within* the child. This is most evident in the *Describe* process rows (Table 7.2.2a). Both Sites showed significant concern with each child's:

- developmental history and the occurrence of a regression phase in toddlerhood;
- communication aspects;
- social interaction aspects;
- repetitive use of objects or stereotypic behaviour;
- nonverbal functioning; and
- self-help skills.

Within-child Emotional difficulties and within-environment causes at Site E

However, there is a great contrast with regards to the subproblem area of 'Emotional / unusual behaviours':

- At Site M only one subgoal *describing* unusual behaviours occurred. This was raised by mother in Betty's case when she was heard screaming during the parent interview.

- On the other hand at Site E, subgoals were initiated by the professionals *describing* Cathy's preference for green, reaction to frustration, interest in sensational stimuli, subjective meaning of her drawings and unusual use of paper. Several similar subgoals were raised in David's case concerning his tendency to throw objects and watch them fall down, other play interests, temperamental characteristics and reaction to frustration. There were additionally much more descriptive subgoals regarding the children's 'social interaction' at Site E. These larger number of subgoals describing emotional and relationship aspects of the child's behaviour were mostly triggered by the presence of Y at Site E.

In line with the above, it was only at Site E that subgoals stating emotional and relationship *causes* were raised by the professionals (see Table 7.2.2b). Unconscious motivations, such as 'playing safe', were attributed to both children, and the possibility of causation by inadequate early relationships

and/or separation trauma were discussed. On the other hand, at Site M the only such causes were raised by Betty's mother when she attributed lack of communication and social skills to 'deliberate ignoring' and 'an overpowering sib'. These were ignored by the professionals.

Again in the *Recommendations* (see Table 7.2.2c), psychotherapy was considered as a possible option only at Site E. The Table shows it as occurring only in E1 where it was explicit. However, the interviews show that in E2, Y also considered but decided not to offer psychotherapy to David, in contrast to Site M where psychotherapy was not part of the agenda at all.

Within-child medical aspects at Site M only

The other contrast between problem areas addressed at each Site concerns medical aspects. At Site E there was only one subgoal in the medical area, namely regarding David's hearing. On the other hand, subgoals regarding medical aspects amounted to 32% and 28% of the total subgoals identified in Amy's and Betty's cases respectively. Moreover, medical problem areas at Site M constituted a major content within each of the five of the six processes from *hypothesis construction* to *recommendations* and *plan of implementation* (only *prediction* was not applied to medical aspects - see Tables 7.2.2a-c). Medical treatment recommendations were in fact not made by the professionals themselves, but both Site M couples raised this subgoal area, while none of the Site E couples raised it.

Thus different problem areas were highlighted by the different assessment settings and discipline orientations. However, as shall be seen in the next section, similar decision-making processes occurred at the two Sites.

7.3. All *task* processes applied at both Sites

Having taken note of the different problem areas to which the decision process was applied, we can now return to the focus of this chapter on decision-making *processes*. As has already been observed, all task processes identified in the coding frame were applied at each Site.

7.3.1. Sequential application of processes

In each of the four assessments, the professionals engaged in the processes generally in the sequential order shown in Figure 7.3.1 below: CONSTRUCT HYPOTHESIS/ES ⇒ DESCRIBE ⇒ EXPLAIN ⇒ PREDICT ⇒ RECOMMEND ⇒ PLAN IMPLEMENTATION. Thus:

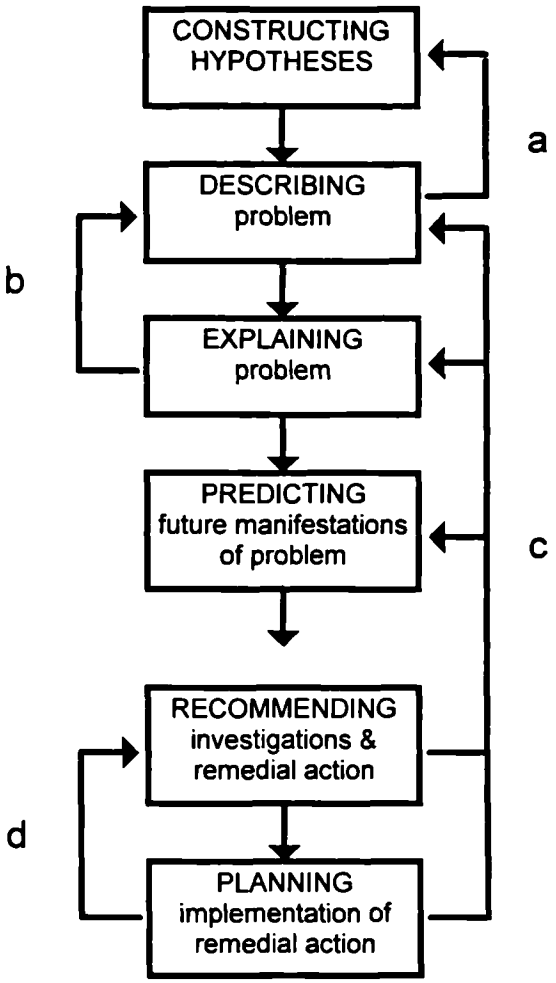
- *Hypothesis construction* was a main feature of the beginning of the assessment. It was followed by the testing of the hypothesis through the elicitation of a *description* of the child's difficulties from the referral agents (parents or professionals working with the child). This led the professionals to develop a provisional formulation - *explanation* - of the child's problems.

- This pattern was then repeated as the professionals engaged in interactive activities with the child, leading to the explicit formulation by the professionals of an *explanation*, *predictions* of the child's needs in the near future, and the formulation of relevant *recommendations* and *plans* for their implementation.

- This pattern was then repeated in the final conference with the parents.

Figure 7.3.1:

Sequential and recursive application of *task* processes



7.3.2. Non-linear patterns

Within this general sequence, however, the application of processes was less linear, as shown by the side arrows in Figure 7.3.1 above. This can be seen from the sequence of subgoals in each case (see Appendix IV, p. [illegible]). For instance (note that the letters 'a' to 'd' refer to the lettered links in Figure 7.3.1 above):

a. the *description* of David's mother as talking to his sib but not to him, raised the *hypothesis* that David had extinguished the mother's attempts to interact with him by his non-responding.

b. the *explanation* that Amy's difficulties were due to severe learning difficulties was followed by a *description* of her emerging communication skills.

c. the *recommendation* to continue current parent strategies and educational provisions for Amy was followed by a *description* of her current skills and an *explanation* of her difficulties as developmental delay, and the *prediction* that she would continue to progress slowly.

d. the *planning of the implementation* of the medical investigations for Betty was followed by a *recommendation* that the conclusions be reviewed by the consultant neurologist.

7.3.3. Problem decomposition: Separate application of sequential process for each problem area

This study has not addressed the sequential structure of the application of the six processes at an individual cognitive level. The reason is that the protocols do not provide a trace of the on-line individual or even group thinking process: the discussions are generally a form of retrospective reports of what individual professionals had decided while interacting with the child and family prior to the group discussion. They are not concurrent think-aloud protocols that have been widely used in verbal protocol analysis (see Woods, 1993). The group discussion cannot also be regarded as a replication of individual cognitive processes: thus, there was evidence of how one professionals' sequential chain of processes was sometimes broken by another professional or a parent pursuing another line of thinking. Even on-line individual cognitive processes may not be linear (Ericsson & Simon, 1993).

However, the evidence does point out one important feature of the sequential application of processes, namely the decomposition of the problem into a number of subproblem areas as shown in Tables 7.2.2a-c above. It was found that the linear sequence of processes suggested in Figure 7.3.1 above was often applied separately to each problem area.

Thus at Site M, there was a clear distinction between the application of the whole decision-making sequence first to the behavioural-educational aspects and then to the medical aspects, or vice-versa. Moreover, vision and hearing were described and recommendations made for their further investigation in separate episodes from those addressing even the other medical concerns.

Similarly at Site E, there was evidence of the intertwined application of processes to the behavioural-educational and emotional aspects of the child's difficulties. The whole cycle from construction of a psychodynamic hypothesis of a failure in early relationships, to its description, explanation, prediction of potential and recommendation and plan for psychotherapy, were completed before the description of the child's level of functioning was confirmed. The application of the decision processes to the behavioural aspects was taken up separately.

Assessment by these two groups of professionals thus allowed for different sequences in the application of the decision-making processes. However, the assessments were still characterised by a goal driven, hypothesis testing approach. This is explained below.

7.4. Three Cycles of problem solving and decision making in each case

The subgoal structure in each case showed that the professionals addressed the problem three times in succession, engaging in a series of three *Cycles* of problem solving and decision making (see Appendix IV).

The term *Cycle* has been used to indicate a sequential series of *task* processes from problem description, explanation, and prediction, to recommendations and plans for their implementation. Each Cycle ended with concluding judgements and plan of action:

- in Cycle 1, provisional judgements led to plans for assessment activity;
- in Cycle 2, stronger professional decisions led to plans on what to tell the parents; and
- in Cycle 3, final negotiation with the parents led to plans for implementing the recommendations.

Table 7.4, below, shows how the protocols at the two Sites fitted into this three-Cycle structure (For a more detailed account of the subgoal structure in each Cycle, see Appendix IV, p.392).

Table 7.4:
Protocols at each Site structured into three sequential decision-making Cycles

	Site M protocols	Site E protocols
CYCLE 1 **Provisional assessment through referral information**	*a.* Professionals-only referral meeting (from letters/reports). *b.* Parent interview. *c.* Tentative conclusions & Planning of assessment activity.	*a.* Professionals-only referral meeting (from professionals involved with the child. c. Tentative conclusions & Planning of assessment activity.
CYCLE 2 **Assessment activity and professionals-only decisions**	d. Professionals-only evaluation meeting. (after 1-hour assessment activity)	d.1. Comments during first observation. d.2. Professionals-only evaluation meeting. d.3. Comments during second observation.
CYCLE 3 **Negotiation of decisions with the parents**	e. Parent conference f. Post-conference reflections (in subgroups)	e. Parent conference f. Post-conference reflections (in subgroups)

CYCLE 1: *A provisional assessment through referral information:*

In the first Cycle the professionals constructed and tested an initial hypothesis from referral information. At Site M they tested it through interviewing the parents, while at Site E they tested it through interviewing professionals who were already involved with the child (teacher, speech therapist etc.) (see Figure

7.4, above). Provisional conclusions were also formed and plans made for testing them through the next Cycle - assessment activity with the child and family.

For instance, at the end of the initial interview with Amy's parents, C1 explicitly commented about having completed "half of the assessment". She later claimed that she had reached solid conclusions at this point and did not really need any further assessment to form final judgements. Similarly professionals at Site E commented on how they had formed a "picture" from the referral session which they later confirmed or changed.

CYCLE 2: *Actual assessment and professionals-only decisions*:

The provisional conclusions formed through referral information were retested in Cycle 2 through actual assessment activity in interaction with the child in the presence of, or with, the parents. At a professionals-only evaluation meeting, they reached relevant decisions and planned how best to communicate them to the parents.

This was a fixed feature at Site M. At Site E, group decisions were also reached at this point in four out of five cases observed. David's case was an exception which however proved the implicit rule. Thus in David's case the three core professionals all reported reaching a conclusive opinion at this point: David had autism and would be best placed at A's special school. They also shared a feeling that there was "implicit" agreement about this opinion. The fact that no decision was taken was regarded as a slip in procedure partly due to the inexperience of the chair, namely EP3 (as reported by herself and EP1). She was cautious about bringing into the open a decision on the child having autism and about breaking the administrative rules by talking about a specific school. A also disclosed later she was concerned at this point about her difficulty in providing a place for him at her school. This procrastination of the decisions was further aided by two factors in the Site E procedure:

- after the first observation, professionals came to provisional judgements and decisions some of which needed retesting in a second activity session;
- even after the second observation, some judgements and decisions could not be concluded because they relied on background information from the parents who were to be interviewed in the next and final session.

CYCLE 3: *Negotiation of findings and decisions with the parents*:

In the third Cycle, at both Sites the professionals shared their findings and recommendations with the parents, thus going again through the whole decision-making process.

At Site M they elaborated the decisions they had taken regarding description, diagnosis, prognosis and investigations and management strategies, modifying them in the negotiation process (see chapter 9). At Site E, they went again through the description process with some new observations from the second session and the parents' description of the child's behaviour at home. At both Sites they ended up with recommendations (in David's case, implicit) and plans for their implementation.

This Cycle was really concluded with post-conference reflections in subgroups. They picked on a particular problematic feature of the assessment - the negotiation of the prognosis in Amy's case; the communication of the diagnosis in Betty's case; the arrangements for placement of the child in A's school in Cathy's case; and the diagnosis of autism in David's case. In all cases follow-up decisions were expressed at this point: either on what to put in the report or what further messages to give to local services (Site M); or direct follow-up with the parents or professionals working with the child (Site E).

7.5. Hypothesis testing approach at both Sites

7.5.1. Explicit hypothesis testing approach

The sequential goal structure of each assessment showed that the professionals followed a hypothesis testing approach. This was also made explicit:

> S1: ... if you've got an idea of em, this autistic tendencies or whether, from the meeting, of a dyslexic child or whatever, you would ask questions related very much to whatever kind of theory, or *hypothesis* you might have. (M1int.S1)

> EP1: [The assessment] is a two way thing; something new comes out of it usually, but you'll certainly get an acknowledgement, a reinforcement of what your original *hypotheses* have been, or diagnosis. (E1int.EP1)

The evidence shows that these professionals had a set of hypotheses arising from their discipline frameworks (see #6.3 above) which they seemed to activate immediately when presented with children who were referred because of concerns with developmental difficulties. One of these hypotheses was actively adopted early on as the first referral information was obtained.

This process was especially explicit at Site M. One of the main hypotheses in each case was raised by a paediatrician at the all-centre professionals' brief referral meeting immediately at the end of the reading of the referral letter and report/s:

> Paediatrician: Are they suggesting autism then do you think? (M1Prot.a)

> Paediatrician: They don't spell the word autism anywhere there? (M2Prot.a)

7.5.2. Hypotheses applied to different problem areas

Hypothesis construction is an important feature in the present study because it is linked more obviously to prior knowledge. As early hypotheses are based on limited information, they evidence more clearly the operation of professionals' expectations arising from their knowledge structures and assessment goals.

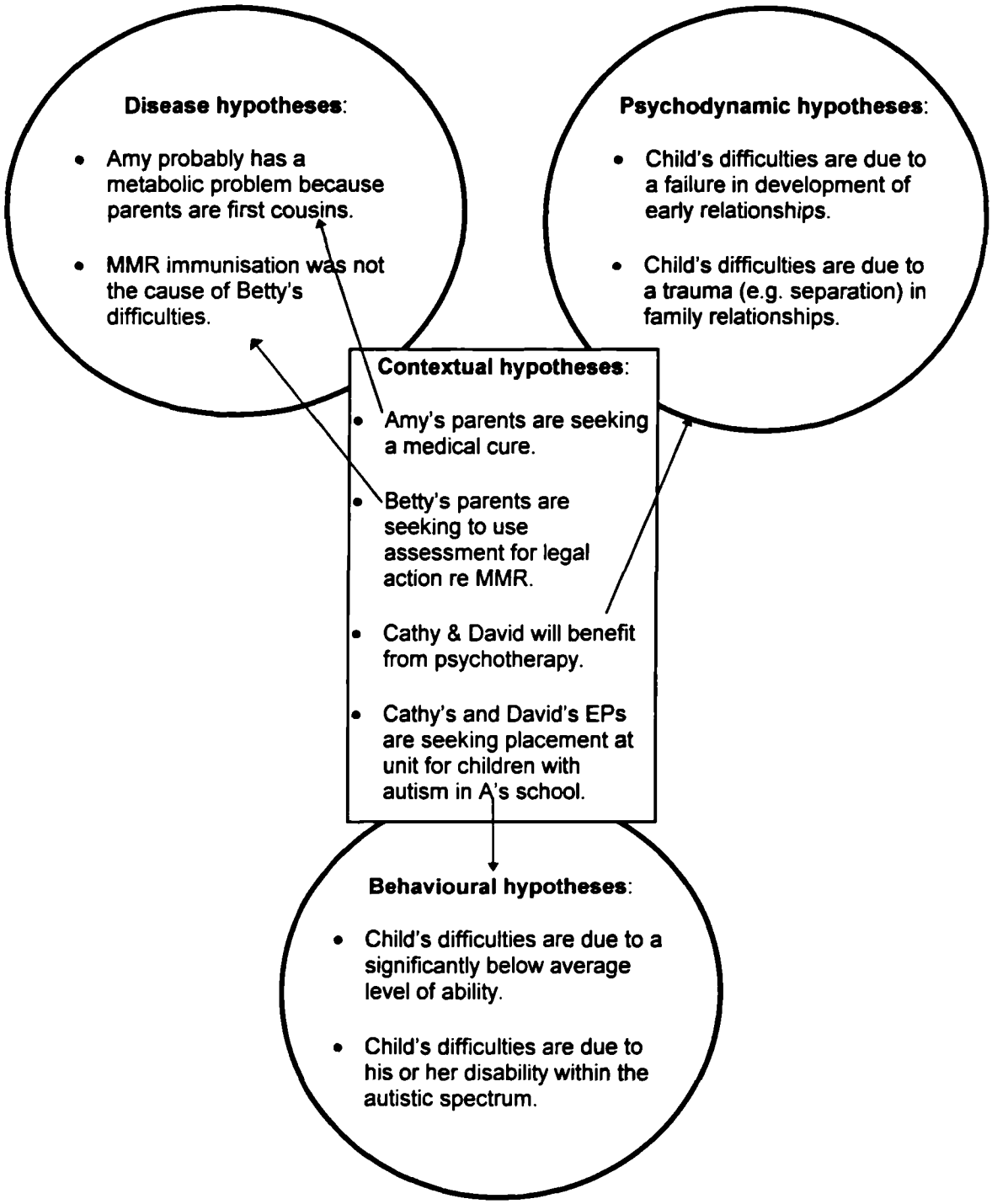
Two kinds of hypotheses were triggered at both Sites:

- Most hypotheses were about *within-child* problems, such as that the child's difficulties lay within the autistic spectrum;

- Additional hypotheses were entertained with regards to referrers' concerns, such as the belief that Betty's parents intended to use the assessment for legal action (Site M), and that the EPs at Site E intended to refer the child to A's special school (see Table 7.5.2 below).

But both types of hypotheses were related (a) to the three different models described in #6.3, namely the disease, psychodynamic and behavioural models; and (b) to the different assessment purposes of each institution, that is diagnosis at Site M, and school placement and psychotherapy provision at Site E.

Figure 7.5.2: Hypotheses activated at the two Sites



7.5.3. Impact of specific hypotheses on the assessment process

The sequential subgoal structure of each assessment shows that these hypotheses had a great influence on the assessment process (see Appendix IV.3, p.[illegible] Sequential subgaol structures of each case).

7.5.3.1. Hypothesis testing at Site M - Amy

At Site M, all the professionals' activity was goal oriented: testing and deciding the main medical and behavioural hypotheses and formulating answers to the parent questions (contextual hypotheses).

Take, for instance, **Amy**'s case. While the interview with the parents covered the usual main areas of physical, medical and behavioural development, the professionals focused on communicative aspects related to the autism hypothesis. Thus C1 and S1 asked extensively about the development of joint attention and pointing. P also asked whether there was any regression in the child's general and communication development (see Appendix IV).

The same hypothesis was tested again through the assessment activities with the child:

> C: ... We have got a sort of repertoire of those informal things that we are looking for and their communication assessments, plus verbal comprehension ..... Does the child have the sort of building blocks of communication that you can then put speech on top of, and also the building blocks of communication that you wouldn't expect to be there if the child had a social communication disorder? (M1int.C)

Meanwhile, they were also testing the developmental delay hypothesis through assessment of nonverbal skills. They planned to make use of items from the Griffiths Scale (a standardised developmental assessment test for children aged 0-8 years widely used by paediatricians in the UK) to be able to indicate standardised levels of the child's functioning for research purposes and for

authority with local services. Meanwhile, however, they were even more focused on engaging the child constructively in the next skills from her latest assessment to get a clinical feel for how far she had advanced in non-verbal and verbal functioning. They intended this also for the parents to be able to share an understanding of the child's level of functioning, and how she could be supported in her learning.

The paediatrician, on the other hand, aimed at the elimination of possible medical explanations of Amy's difficulties. She looked for evidence of any medical condition (e.g. dyspraxia), and tested Amy's vision and hearing in view of the parents' concerns, and in order to ensure they were not interfering with her learning. (In Betty's case, because vision was not a concern, she did not in fact test it).

At the evaluation meeting following the assessment activity, the professionals first main gaol was to establish the hypothesised diagnosis: they in fact rejected the initial hypothesis of autism and agreed Amy was globally delayed; severe learning difficulties was seen as the explanation of her stereotypic behaviour. The next question asked in this institutional setting was whether "all possible medical investigations have been carried out" (M1Prot.d). The professionals then started recalling each parent question and agreeing on best answers regarding the medical hypothesis of possible metabolic disorders and prognosis.

Because the parents' questions had concerned mostly medical issues, they decided that P would chair the parent conference. She gave the conclusions as answers to what the parents had asked at the beginning. The other professionals then went on to answer the parents' further questions about the child's level of functioning and prognosis.

Thus, Site M professionals were evidently using their initial hypotheses about local services' and parents' questions throughout the three cycles of the assessment.

7.5.3.2. Hypothesis testing at Site E - Cathy

A similar process occurred at Site E. Take for instance, Cathy's case. At the referral meeting, Y picked up the separation incident in her second year, and led the group in the construction and elaboration of a hypothesis that the child's difficulties might have been caused by the child's separation from her parents. She focused the search through questions like: "Where did she stay?" when hearing that Cathy had been sent back to Thailand. And asking the speech therapist how she was responding to supportive relationships:

> Y: S2, could I ask a question? You said that originally you saw her one-to-one.
>
> S2: Yes
>
> Y: How did she respond to that as compared to the group? (E1Prot.a)

Meanwhile EP1 and A were testing their behavioural hypothesis (see italics in the extract below) about Cathy being possibly developmentally delayed. They tried to elicit accounts of what Cathy could do or not do from the professionals who had worked with her:

> EP1: *I was just wondering cognitively what level she is at. I mean I was wondering whether that's getting in the way of the speech and signing development issue,* because she is at a very young level in terms of ?? ??
>
> T: It's very difficult because of the, of the obsessive behaviour
>
> EP1: Right. So she is not using things functionally.
> .....
> A: How does she indicate any want?
> .....
> A: How does she respond to different textures. Does she resist? (E1Prot.a)

The first observation session was planned to test both the psychodynamic and the behavioural hypotheses by allowing for interaction between Cathy and her

parents and free activity with her favourite toys. Y had a big influence on the commentary and almost completely dominated the topic of the post-observation discussion. She provisionally confirmed her hypothesis that the child's behaviour - repetitive routines meant "playing safe" - was significantly a reaction to her separation trauma; and that she was showing signs of potential to create relationships while mother and father had the potential to relate to her. She decided and asked the group to offer psychotherapy to the child and family at this point as she had to leave before the parent conference.

Meanwhile the two EPs and A, while sharing Y's conclusions, were testing the other hypothesis about the child's cognitive performance. They decided she was only slightly delayed for her age. EP2 then asked the professionals to entertain the contextual hypothesis about best school placement.

At the parent conference, both hypotheses about Cathy's potential for progress and possible benefit from psychotherapy were confirmed. Mother elaborated Cathy's reaction to the separation, which she herself thought was traumatic and which had been longer (lasting 20 months rather than 5 months) than what the professionals had been told in the first Cycle. EP1 thus explained Y's formulation of the separation being the possible cause of Cathy's difficulties and that the child could be helped through psychotherapy.

At this point, EP2 sought a confirmation of his other hypothesis that the child had autism while trying to meet the goal of answering the parents' questions: mother had asked if Cathy was autistic or not. But EP1 rejected the use of Site E for formulating a formal diagnosis (see Chapter 8), and the issue was dealt with briefly.

EP2 then sought the confirmation of his other hypothesis and goal about the child's best school placement. EP1 and EP2 tactfully engaged A into a decision about Cathy's best placement: A did see Cathy as an appropriate candidate for her school's observation and assessment unit, which included the provision of regular speech therapy. There was a discussion on its

appropriateness and possibility, which led to arrangements for her to have a place within 6 months, though with the proviso that it be mentioned in her Statement.

Here again, the assessment process was dominated from the beginning with the repeated testing of initial hypotheses about the nature of within-child difficulties, and about the relevant decisions being sought by the parents and education and health services on special educational provisions, especially placement, and psychotherapy.

7.5.3.3. Example of the testing of a hypothesis through three Cycles - David

The three-Cycle sequence gave the professionals an opportunity to elaborate and retest relevant hypotheses. The analysis showed that at both Sites one or more hypotheses were developed at the beginning of the assessment which were retested through each Cycle. At both Sites the professionals' hypothesis guided their search for information at the referral interview, their choice of assessment activities in Cycle 2, and their communication of findings to the parents in Cycle 3.

David's case at Site E offers a good illustration of the triple testing of one of the main hypotheses in the case.

As the teacher and psychologist highlighted David's difficulties with communication and social interaction in the first Cycle, Y hypothesised that these might be the result of a failure in parental building of relationships with a sensitive child. On the other hand, EP1 asked the group to listen to EP3 read the conclusion from the medical report that the child "was displaying many features of the autistic syndrome." No comment was made.

The failed family-relationships hypothesis was tested during the first activity session in Cycle 2 by asking the parents to engage with David. The professionals observed that there was a lack of communication from the parents towards David, as well as vice versa. The professionals-only discussion raised two rival hypotheses: (1) the parents had stopped talking to David because he himself had extinguished their early attempts at reciprocal interaction in infancy; or (2) David's mother, who appeared depressed, had failed to bond with David from birth and/or had separated from him for a length of time leading to David's search for ways of coping without social interaction. Thus it was planned to seek a more detailed account from the parents on David's early communication development in Cycle 3.

In Cycle 3, the second hypothesis that autism in David had extinguished initial parental approaches was confirmed as the parents described how he was interacting up to around 18 months when there was a sudden unexplainable regression in his communication behaviour; moreover no separation had occurred. The whole picture was thus built progressively leading to a firm, though implicit, conclusion about David's difficulties being within the autistic spectrum and his need for relevant special schooling.

7.6. Important differences between the Cycles at the two Sites

There were some important structural differences between the Cycles at the two Sites that had an impact on the process.

7.6.1. Referral Cycle with parents (Site M) vs with professionals (Site E)

Site M professionals obtained a direct expression of parental concerns and understandings in the first Cycle. These concerns were thus given due weight in the assessment and were then more deeply elaborated in Cycle 3. The parents felt that they had had an unusual opportunity to express their concerns. At the same time, because the local services were a known entity, and because referral reports were often extensive, the professionals at Site M could tune in to those concerns as well. From the data it was not possible to gauge the impact of the Site M assessment on local services.

At Site E the first referral session did not include the parents. Thus, the professionals experienced a lack of some important information on the child's early history and were also less aware of parental concerns. These accounts were only obtained in the final Cycle. Consequently:

- Some decisions on the nature of the child's difficulties and relevant recommendations were tentative until they met the parents in the third Cycle. Because the professionals were not sure if they agreed about the final opinions, these were not discussed with the parents in David's case.

- Secondly, some important parental concerns on diagnosis and prognosis were either missed altogether (David), or not given adequate consideration (Cathy) (see Chapter 8).

7.6.2. One session of assessment activity (Site M) vs two sessions (Site E)

In Cycle 2 there was only one assessment activity at Site M, which included a medical examination, followed by a professionals-only evaluation; but there

were two such sessions at Site E, one followed by a professionals-only evaluation and one by the final parent conference of Cycle 3. Two contrasting impacts resulted at the two Sites:

- Firstly, at Site E there was a *greater opportunity to observe the child's activity with the parents.* This occurred according to plan in both cases at Site E. Thus, in David's case, father was able to show how he could contain his son, which boosted his participation in the final session and his feeling that all aspects of the child's behaviour had been seen. In contrast at Site M, though Amy's parents were pleased with the success of the professionals' interaction with their child, Betty's parents were dissatisfied that they had not been given an opportunity to show how their child could engage in play with them.

- Secondly, the Site E procedure made it more difficult for professionals to reach conclusive decisions. They felt they needed to reach decisions among themselves before sharing them with the parents (M2int.A). Yet the procedure did not allow for a professionals-only meeting after the second assessment activity session. Moreover the direct meeting with the parents occurred in one session at the final parent conference, without any opportunity for professionals-only reactions to parent information and requests. Thus in David's case no decision on diagnosis or placement was explicitly made. When the child had been contained by the father in the first activity session, the issue of diagnosis did not seem so clear; in the second activity session David's behaviour with the teacher and EP3 confirmed the diagnosis of autism, but the parents were also watching behind the screen and the professionals did not have an opportunity to share their judgement before meeting the parents at the final conference. Similarly, the parents request for special school placement was only mentioned at the parent conference and the professionals only noted it without any indication of possible placement, except with regard to the formalities of Statementing. Implicit opinions were not raised in the presence of the parents because of the sensitive nature of the diagnosis of autism as well as the lack of

adequate information about placement possibilities by EP3 and C2. Thus these issues were only talked about informally after the parent conference. In contrast, at Site M, the professionals had had an opportunity to thrash out their different views on Betty's diagnosis so that they could present one view more elaborately to the parents.

7.6.3. Parent interview in Cycle 3 at Site E

In Cycle 3, Site E professionals subjected the parents to an interview on the child's early history and behaviour at home as well as a discussion of findings and decisions. This put the parents in a position of being under investigation rather than in the position of sharing views about the findings and decisions.

The impact is evident in the parents' interaction at the two Sites. The parents at Site M had more assertive skills than those at Site E. However, there is evidence also of the impact of the assessment structure on their interaction:

- At Site M the professionals had monopolised the initial parent interview through their questioning. However, in the parent conference, the parents had a much larger share in the raising of issues that concerned them.

- At Site E, the professionals focused their only discussion with the parents at the end on getting information from them rather than sharing with them their findings and decisions. Thus, even though EP1 was skilled in eliciting participation, Cathy's parents still did not have as much opportunity to have their concerns attended to as those at Site M. In David's case, Y was unusually given the opportunity (at Site E) to interact with David's parents in a psychotherapeutic fashion that simply followed parent concerns. But when Y left after 10 minutes, her approach was put aside, and the interview became one of merely seeking information from the parents. Indeed, because the meeting was being directed by an inexperienced EP (EP3), the professionals in fact failed to take up parental attempts to raise their

concerns about the child's diagnosis, and also failed to share any of their own opinions about the nature of the child's difficulties or educational possibilities with the parents.

7.6.4. Different pre- and post assessment links

Professionals could withhold their opinions completely from the parents in David's case also because of a different overall structure of the Site E procedure. While Site M professionals had not seen the parents previous to the assessment and were not expected to see them again afterwards for at least six months, the Site E professionals had continuing links with the family. Thus, EP3 informed the parents she was going to see David again at the nursery and meet the parents once more in the following weeks. And the parents would be meeting the teacher the next day. Thus the parents could afford not to press for an opinion right away.

Pre- and post-assessment links were, however, also taken care of at Site M as will be seen in the next section.

7.7. Pre- and post-assessment links

The above description of the sequential Cycles of hypothesis testing within each assessment were complemented by another process that highlighted the sequential dimension of the assessment process: at both Sites the assessment event was linked to a continuous process of assessment and intervention with the child and family. As tertiary level Sites, these assessments were indeed generally one-off events, but their effectiveness was seen by the participants themselves in their link to previous and later local services.

7.7.1. Pre- and post-assessment links at Site M - Amy

The director of **Site M** (C1) saw her tertiary centre as being supportive to the parents over a long term through the local health services. She regarded the latter as the longer-term supportive system for the parents.

First of all it was understood that, as a tertiary centre, their services would be more effective if they were sought for a second specialised opinion *after* thorough investigations and support by local services. This was typically the case for Amy. On the other hand, it was felt that it was unusual that Betty's parents were practically getting a first opinion - a first mention of autism:

> C1: Well, as a tertiary centre we are often seen by parents as a kind of second opinion or an opinion at the end of the line, but they've had some input, they've had a lot of discussions, they have actually moved a long way emotionally, and this family hasn't moved at all, they've had one consultation before seeing us ... (M2int.C)

Similarly S1 referred to the 'unusual' situation of this family not having an established local network of support before coming to this assessment.

This situation was commented on immediately after the interview with the parents, when the professionals were planning the assessment activity session:

> S: Didn't they have somebody chatting through this with them?
>
> P: Portage, or something.
>
> S: Yes, absolutely.
>
> P: Or nursery? No.
>
> S: It's ?? ?? ?? they've done a screening not investigation.
>
> P: Yes. (M2Prot.c)

C1 attributed this to a weakness in the local paediatrician's way of working and referring. C1 decided she needed to talk to her because she had made too

many referrals apparently without processing them adequately herself in the first place.

Secondly, the assessment itself was seen as being more effectively done if the local services were contacted. In the case of Amy, no telephone contact had been made with previous professionals or the parents. Though a lacuna, this was not seen as having interfered significantly with the process because substantial professional reports were available and the parents were articulate. But she cited another instance where telephone contact had ensured the smooth connection between previous services and the assessment:

> C: ... Last Monday I saw a child that for some reason or other I hadn't looked at the notes beforehand. ... So I had to ring [the EP] up ?? He was a child that could do various bits of psychometric tests and I did not want to redo what he had just done just lately. So, in order for the process to go smoothly and quite usefully with these kinds of requirements, we usually do want to, either speak to the parents or get additional information from somewhere. (M1int.C)

Given this idea of process, she also saw the assessment service they offered as not intended "to do everything," but to answer the specific questions raised by the referring agency and parents at that point in time. In fact some of the decisions in Amy's assessment had to be postponed because of the lack of appropriate links with previous services. Thus, the CT scan results had not yet been received on the day of the assessment and no decision could be taken about her need for an MRI scan or otherwise.

Thirdly, the findings of the assessments had to be communicated effectively to local services. This was to be done especially through the written report which Site M bound themselves to send to whoever the parents thought relevant within a month. They also gave the parents an immediate hand written summary of the conclusions and recommendations.

Thus, because C1 felt that she had given Amy's parents an overoptimistic picture, she decided on the need to state clearly "severe learning difficulties" in

the letter to the paediatrician (which was indeed done). On the other hand, because she felt Betty's parents were very distressed by the diagnosis of autism, she decided on the need to contact the local services immediately (which S1 did within a week) in order to ensure counselling support locally, as well as speech therapy service which the parents had felt the need for. In this case, this continuing support was in addition to the decision for arranging for further investigations at the same hospital, for a review by the consultant neurologist in six months time, and for a further review by the same team within 12 months.

7.7.2. Pre- and post-assessment links at Site E

More direct pre- and post-assessment links were obvious at Site E. Here the professionals already involved, or who were to be involved, with the child and family, were present at the assessment. The Site E assessment was one of a chain of services they were offering to the child and family.

Thus the EPs had referred the cases to Site E in order to hasten the Statementing process, as in fact happened. Both EP2 and EP3 had already assessed the child and interviewed the parents before the Site E assessment. Moreover, they planned a further psychometric assessment, and they were then to put together all the findings into a Stage 4 Statementing report.

Thus, in **Cathy**'s case, the assessment constituted a first meeting of the child and family with the deputy head of school (A) where the child was to be placed, and with the psychotherapist (Y) they would meet at the Child and Family psychotherapy service. Indeed A herself made it a point to relate to the parents right after the assessment. She also suggested plans for ensuring a smooth transition for Cathy from her current nursery to A's school.

Meanwhile the professionals already involved were all maintaining their links. EP2 was specifically indicated as the liaison for the parents for the

Statementing process and for psychotherapy arrangements. Cathy's teacher met the mother the following day at the school and discussed the assessment with her. The speech therapist was to continue to be similarly involved until Cathy moved to the next school.

Thus at both Sites, there was an understanding that these families and local services were involved in the progressive care for the children, and that the transdisciplinary assessment was only one in a chain of events supporting the child and family.

7.8. Conclusion

This chapter has shown that professionals at both Sites adopted a sequential decision-making approach to the assessments.

- Though focusing on some different aspects of the child's difficulties, they engaged in the six decision-making TASK processes in each case.
- Each case was consistently decomposed into subproblem areas within which there was evidence of sequential application of the six processes though the group discussion also showed evidence of back and forth applications of processes.
- The whole assessment event was structured into a series of three Cycles of problem solving and decision making.
- Moreover, professionals tried to link their own assessment to previous services received by the child and family and to the next actions to be taken by themselves or others as a consequence of their findings and decisions.

The next chapter will focus on the diagnostic process at both Sites to show how these sequential processes were carried out within a number of *knowledge*, *goal* and *negotiation* schemas on assessment of disability.

Chapter 8

RESULTS III: THE EXPLAINING PROCESS: INTERACTIVE ACTIVATION OF KNOWLEDGE, GOAL AND NEGOTIATION FRAMEWORKS

8.1. Introduction

Chapter 7 presented the findings of the study on how professionals used a sequential three-Cycle, hypothesis testing, procedural framework in the assessments.

This chapter focuses on one of the six *task* processes - the *Explaining* process - as a key to the activation of professionals' *knowledge, goals* and inter-professional *negotiation* frameworks in assessment. The following findings are reported:

- The *Explaining* process was central to decision making at both Sites. But professionals at Site M construed it as a major goal in itself (i.e. giving a diagnosis), while those at Site E construed it as only a step towards the other major goal of deciding on the best possible placement for the child.

- *Three knowledge models* influenced the professionals' explanation of the disability: the disease model was dominant at Site M, and the behavioural and psychodynamic models were dominant at Site E.

- Along with the above knowledge frameworks, professionals activated at least eight other interpretive schemas: six *goal* schemas in terms of who was construed as their client (parents, services, or child), and what use would be made of the assessment decisions (getting resources for the child, therapeutic support for the parents, or providing them with a report to be

used in legal action). Two inter-professional *negotiation* schemas were activated (the colleague-expectation and power-game schemas).

The account makes use of individual cases to illustrate each of the above findings because it was important to show how schemas were activated concurrently in decision-making *action* during the assessments.

8.2. The *Explaining* process was central to decision making at both Sites

8.2.1. The explaining process

Note that the term *Explain* has been used for one of the *task* processes in the coding frame to link it to decision-making theory. It refers to the process whereby the decision maker tries to integrate the perceived elements of the problem into one explanatory structure. In assessment of disability this process is generally captured under the term *Diagnosis*. The latter term, however, usually has a more restrictive meaning, being often associated with giving a label to the disabling condition, as will become evident in the way it was used by participants in this study.

The *Explaining* process has important implications for this study because explanatory accounts carry with them a system or model of organising knowledge about the world (cf. Farr & Markova, 1995). It will be used in this study as the key to the professionals' knowledge and interpretive structures within which they developed an understanding of the nature of the problem and its solutions.

8.2.2. Formal distinction between *diagnosis* and *assessment*

First of all, Site E professionals shared the view mentioned in the literature (see Chapter 2) that *diagnosis* is associated with a medical model and *assessment* with an educational model. EP1 explicitly contrasted the two terms. She associated the term diagnosis with "medical staff" and the "hospital diagnostic service," and saw it as implying giving a label to the child which "always becomes a tablet of stone ... And people then begin saying, 'Well, this child is autistic,' or 'This child has a huge, enormous cognitive problem ...,' and that wasn't really the process that we were meeting to do" (E1int.EP1)

On the other hand, EP1 saw the Site E role as being that of making a "legally based *assessment* ... in terms of specifying the child's needs, in order to meet the needs via a provision which will meet these needs, and help the child's development go ahead; and we're not into labelling" (E1int.EP1). Thus in the parent conference of Cathy, EP1 put a cold shower on EP2's attempt to raise the parent question on whether they thought Cathy was autistic. She stated that she didn't think any participant could answer that question because it was a very specialist and complex condition, and which was to be decided by medical personnel.

On the other hand, EP1 herself reported in the post-assessment interview that there were also "diagnostic" functions within Site E: the psychotherapist used it to determine if the child would benefit from psychotherapy, while the speech therapist used the psychologist's judgement on the child's cognitive levels as guidance in their work. But these were only "spin-offs" and not the main object of the Site.

8.2.3. Informal diagnosis at Site E

EP1 may not have been aware, however, that diagnosis as an explanatory process *was in fact* also a central process underlying recommendations at Site E.

Chapter 2 discussed the different aspects of a diagnosis: causality and classification (and prognosis - see Hall, 1984) with implications for intervention. The professionals at Site E were all focused on intervention. But they all also engaged in an attempt to attribute cause and prognosis directly or indirectly through classification. Their refusal to make diagnostic statements was restricted to not "labelling" the child as autistic.

Thus, even in the same breath of denying that anybody could pronounce on the diagnosis of Cathy, EP1 moved straight into a diagnostic formulation (see italics):

> EP1: ... ... Well I think most of us here see autism on a continuum. ... But I don't think anybody here can say at this moment she is an autistic child, and, you know, your doctors here will be more specific on that after time.
> .....
> *Some of her behaviour is, but on the other hand we're seeing a lot of very normal development. It is delayed, it is not at the age that she is, a lot of her play, but then that may be accounted for by this big gap when she lived away from you and I think was very emotionally withdrawn during that period.* (E1Prot.e)

This attempt to *explain* the child's inappropriate behaviour falls clearly within the *diagnostic process* in Naturalistic Decision Making (Klein, 1997). This diagnostic activity was "initiated in response to uncertainty about the nature of the situation," and consisted of an "attempt to link the observed events to causal factors; by establishing such a linkage the decision maker would obtain an explanation of the events" (*Ibid.*, p.290).

8.2.4. Evidence for the implicit diagnostic process in Cathy's case

In Cathy's case, the whole assessment hinged on the above "hopeful" diagnostic formulation by EP1. This became the "highlight" (E1int.EP1) of the whole assessment. On it she based an optimistic "prognosis" for the child and the recommendations for psychotherapy and school placement, contrasting it with the situation of children "more involved in the autistic continuum" (E1int.EP1). This diagnostic-prognostic formulation was fully shared by EP2:

> EP2: ... a whole thesis was brought up behind the scenes here on the separation and emotionally based case. So I certainly learnt that is one of the major cornerstones of this case. (E1int.EP2)

Similarly, A formally stated she "doesn't make judgements about children," but in fact was from the beginning building a diagnostic-prognostic formulation (E1int.A). It was on the basis of this formulation that she made her recommendations for possible preparation of Cathy for mainstream schooling and her acceptance of the child as a candidate for her observation and assessment class:

> A: ... Some of the things she does, you know this twiddling with the crayon and things and this scribbling, you can start thinking, 'Is she on an autistic continuum?' But, I never make judgements about children. ...
> .....
> I thought about it when at the ... first discussion before the observation they said that she has got this flicking movement with the crayons, and ... and that she doesn't relate to any of the other children. (E1int.A)

A was in fact taking a diagnostic decision in refusing to call Cathy autistic at that point in time, because the label was "condemning" for the child and family. It was also not politically correct for her to do so.

EP2 went further in actually also using the label - though in softened terminology - in his subsequent Stage 4 report. This was a way of ensuring Amy the placement they had agreed was appropriate, that is not in a language

unit but in A's observation and assessment class. He wrote that "She also has some features of behaviour that are described within the autistic spectrum" and went on to recommended for her:

> A school which provides for children with communication difficulties and who have some features of behaviour within the autistic spectrum. (EP2 Stage 4 report)

8.2.5. The implicit diagnostic process in David's case

The distinction between engaging in the diagnostic process, even in terms of classification, while not pronouncing the diagnosis of autism on the child, became clearer in David's case.

David was younger than Cathy (4:02 years vs. 5:01 years). But the autistic continuum features were more pronounced. Thus, his teacher and the special needs adviser at the school were already talking about him as being autistic even before he was seen by any experts. The key-worker EP (EP3) had had the same "feeling" about him, but being inexperienced in the area had referred him to Site E to confirm that view. Meanwhile there was a diagnostic pronouncement in a recent paediatrician's report which was read in the first referral session at Site E: "David is displaying many features of the autistic syndrome." By the end of the assessment, there was an "implicit" understanding among all the professionals that his difficulties were within the autistic spectrum (E2int.EP1). EP3 reported this as the "greatest point" of the assessment:

> EP3: But I think in terms of the greatest point, I guess was, that I had my suspicions confirmed really that he was a child either with autism, or on the autistic spectrum. (E2int.EP3)

The three core professionals had little doubt about his difficulties being within the autistic spectrum. A had decided this in the second Cycle when she

therefore "put on her other hat" as deputy head of the school with an autistic unit. They had no place for him in that unit, and he was "not observational assessment material, [his diagnosis] is quite clear," so he would not be appropriate for the observation and assessment class (E2int.A). In fact A very uncharacteristically did not say a single word at the parent conference (also made possible through EP3's inexperienced chairing).

Nobody made any reference to the label throughout the formal assessment discussions, except indirectly through the reading of the conclusion of the paediatrician's report. On the other hand, the label was a main topic in post-assessment informal talk among all professionals.

The importance of the above evidence is that the issue of the child's diagnosis was indeed the top concern in professional minds even at this Site and was crucial for the decision about his placement. This was prevented from surfacing in the formal discussion through six constraints arising from knowledge, goal, and negotiation schemas:

Knowledge constraint:

- most of these professionals were initially not completely sure the child's development was within the autistic spectrum;

Goal constraint:

- most felt the label of autism had a "condemning" impact;

Negotiation constraints:

- all agreed that since the parents had not yet been told about it, it was not the right forum to divulge the news;
- most did not think it their role nor that it would be useful to label the child;
- the label had placement implications which were problematic for A;
- the chair was an inexperienced EP who was cautious about the issue and was a novice at managing this kind of discussion (E2int.EP1).

But, nonetheless, the issue was centrally relevant to the function of Site E as recommending appropriate special school placement or provisions.

8.2.6. Contrasting approaches to diagnosis at the two Sites

The above finding still pointed out to a contrast between Site E and Site M in their approach to diagnosis in the figure/ground place it held in the whole assessment event:

- *At Site E, the diagnostic process was in the background*: it was subservient to their dominant concern of determining the best placement of the child and whether psychotherapy was an appropriate service. This was explicit in the case of Cathy. In David's case, EP3's failure to move on to the placement issue at the assessment was because she needed longer to determine what his needs were:

  > EP3: OK, now here we are [i.e. having confirmed David's difficulties were within the autistic spectrum]. Where do we go from here? So I guess it allowed me to plan for his future, his educational future a little better because I have more information. (E2int.EP3)

- On the other hand *at Site M, the formulation of the diagnosis constituted the foreground.* That in itself constituted a main intervention with the parents and the local services:

  > C: Our job is to look at children about whom there are questions about the diagnosis, or the assessment or the management ... (SitMPol.C1)

  The parents and local services expected an answer to their question on the diagnosis of the child's difficulties from Site M. And Site M professionals regarded the ability to reach a conclusion about diagnosis, where less specialist professionals had remained confused, as an essential part of their expertise. Not only were they qualified to pronounce a diagnosis, but it was almost their raison d'être.

Thus in Amy's case, they in fact made no change to the special educational provisions which were already in place. But this did not affect the importance of their task. The parents appreciated what the professionals themselves called a "talk solution": a more specific formulation of the child's diagnosis and prognosis (M1int.C1).

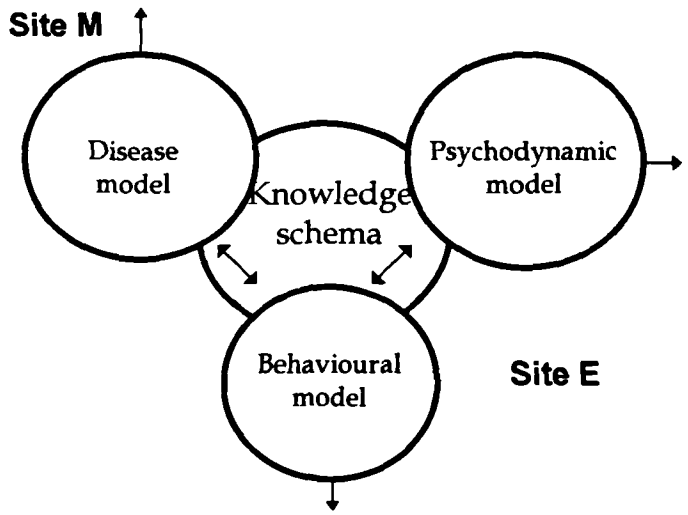
8.3. The influence of different models of disability

8.3.1. Evidence of three major models of disability

There was also a contrast between the two Sites in the way the diagnosis was formulated because of different knowledge models within which it was constructed (see #6.3.5 above). Three major models were identified in the assessment process (see Figure 8.3.1, below): the disease model which was used mainly at Site M, and the behavioural and psychodynamic models which were mainly used at Site E. The evidence for the application of each of these models in each case is explained below.

Figure 8.3.1:
The application of three knowledge models in understanding the child's developmental difficulties

- Assume child's disability caused by physiological impairment:
  "P: ... little connections haven't somehow connected up as they should" (M1Prot.e).
- Recommend further investigations, but say there are constraints:
  "P: Parents vary in how much they want to search for a cause, but we would generally feel that we shouldn't leave a stone unturned .....
  in the majority of children with similar difficulties, though we look very hard we don't necessarily find the cause ... " (M2Prot.e).
- Check that vision and hearing impairment are not interfering with child's learning:
  "P: I think she needs tests to establish what her hearing threshold is" (M2Prot.e).
- Classify child's disability within known syndromes:
  "S: She looks to me like very globally delayed. It doesn't look anything autistically about her" (M1Prot.d).
- Support parents to understand and learn to live with child:
  "F: Would she be able to do, you know, the normal staff that we all do? .....
  C1: it's absolutely, naturally you to want to know what she will be like when she is 12 or when she is 20" (M1Prot.e).



- Assume child's difficulties partly caused by inadequate relationships or trauma in early childhood:
  "Y: Most of her environment changed drastically at 15 months. What she lost is her mum and dad, and she must have felt very lonely. It makes sense that she should be trying to control her environment now" (E1Prot.d1).
- Interpret child's inadequate behaviour as a coping mechanism:
  "Y: On her own terms. Keeping out anything unpleasant. Playing safe" (E1Prot.d2)
- Check if child shows potential for relating:
  "Y: She will allow some interaction beginning her play. There's a lot of humour and play" (E1Prot.d2).
- Check if parents can be supportive:
  "Y: It really strikes me that this is the type of family who are receptive to the idea of helping the child and family" (E1Prot.d2).

- Assume child's learning has been influenced by experience of physical and social environment:
  "A: I would also like to know when she went back to Thailand, did she go to Bangkok, which is a very noisy city, or did she go to a rural area where there is more space" (E1Prot.d1).
  "A: She'll have seen a lot of this kind of movement [of hands as in use of chopsticks]" (E1Prot.d2).
- Describe child's level of skills:
  "EP1: I was just wondering cognitively what level she is at" (E1Prot.a).
  "EP1: She is actually understanding about the dimensions and what goes on what" (E1Prot.d1).
  "EP2: ... developmentally also, it's at the stage where you're ceasing to be so egocentric, and aware of other people's needs and wishes, a sort of this theory of mind" (E1Prot.d2).
- Describe child's needs for progress:
  "S2: She will use the brush functionally with me, but as soon, em, as I don't say draw, she'll ...
  EP1: Yeah. That's the need, isn't it?" (E1Prot.a).

8.3.2. The application of the disease model at Site M

Disease orientation of the institution

A disease orientation was central to the Site M assessments (see #6.3.5). This tertiary institution was part of a hospital organisation, mainly servicing local health services. As the clinical director explained, "Our specialism is serious disability and that's what we're best at." And serious disability generally involved bio-physical - neurodisability - issues:

> C: Our job is to look at children about whom there are questions about the diagnosis, or the assessment or the management; particularly in children that have neurodisability. For children that have some sort of learning difficulty, apparently mild learning difficulty with really no other problems, is a matter for the education - for educationalists. (Site Mpol.C1)

Thus it was no surprise that, in the cases under review, the parents were seeking a medical consultation, and expecting bio-physical explanations and treatment in the first place. Describing and explaining the child's *physical* condition was a main goal in the general schema for assessments at Site M but not at Site E (see Appendix IV).

Explicit statement of physiological assumption

This disease orientation rested on the assumption that disability *had a physiological cause*. While no specific cause had been found for Amy's learning difficulties, P explained her assumption:

> P: ... We can assume really that early on in the way the brain has developed that little connections haven't somehow connected up as they should ..... When you think of the complexity of the developing human, ...it's surprising that things sort of, you know, do not go wrong more often really ... (M1Prot.e)

A similar explanation was given by the consultant paediatrician at the same site in another case of learning difficulties for which no cause could be specified.

Recommendations for further medical investigations

Within this model, the recommendations of Site M for both Amy and Betty consisted mainly of further medical investigations to look for a cause (see Table 7.2.2b above). Because M1 parents were cousins, the possibility of metabolic disorders in that case were regarded as higher (M1Prot.d & e).

Though C1 and S1 expressed no opinion on the possibility of such causes, these were still part of their schema. Thus in the professionals-only evaluation (M1Prot.d), C1 asked P if all possible medical investigations had been considered, and she recalled this schema in the post-assessment interview when asked if there were still any questions about the case:

> C1: Well, I am interested to know if they do come up with any causation. We did recently find a child ... had a metabolic disorder that had not been previously diagnosed, so that remains a possibility. (M1int.C)

It was C1 also who raised the possibility of metabolic disorders in M2 at the post-assessment professionals' reflections: "You don't think there's a treatable metabolic condition?" This was then followed by S1's question as to whether there was a possibility of it being a case of Fragile X - a genetic anomaly that has recently been associated with autism.

Problematic professional-parent appeals to the constraints of medical knowledge

It is also worth noting how it was only at Site M that the professionals explicitly referred to the constraints of the limitations of medical science: no cause was found for some learning difficulties, and even if found most often no medical treatment was available. Thus P referred to difficulties in finding the cause: for Amy's learning difficulties: "We don't always find a cause, diagnose it"

(M1Prot.d); for her wide-based gait: "I don't think there's any clear [cause]" (M1Prot.d); for rocking behaviour, "I don't know that we really understand" (M1Prot.e). Similarly for Betty's autism: "The cause of that, these sort of difficulties [global delay and autism] is not well understood," and "It's likely to be very hard to find a cause" (M2Prot.e); for the possibility of MMR being the cause: the "sort of general feeling is that this association between immunisation and cephalopathy really isn't proven" (M2Prot.a); "I think it's difficult to know whether, perhaps, to completely discount" the impact of immunisation (M2Prot.e).

These knowledge constraints were problematic. P reported there were two stances among both professionals and parents as to whether it was worth bothering about further investigations: some like herself tended to favour investigations despite the small returns, while others would see the investigations as not worthwhile. In fact P did make her own judgements to investigate more fully in Betty's than in Amy's case. But in both cases she asked for the parents' wishes, and in both she warned them that the chances of discovering useful causes were very small - "like looking for a needle in a haystack" (M1Prot.e).

Betty's parents had had no investigations and felt they were necessary to eliminate medical causes, and in this line were supported by S1. This raised the medical voice in P:

> P: Yes. You know, that's what we generally think. I think parents vary in how much they want to search for a cause, but we would generally feel that we shouldn't leave a stone unturned, if there is any possibility of finding an explanation I think we should look for it. (M2Prot.e)

Regular vision and hearing check

Within this assumption of physiological causes of learning difficulties, Amy's vision and hearing and Betty's hearing were examined and further

investigations recommended. Oral-motor and general physical coordination were also assessed.

Resort to classification of child's difficulties

Since in the majority of cases no physiological causes of disability could be found, professionals at Site M in fact focused primarily on classifying the child's difficulties within a known "syndrome". In the professionals-only evaluation session, the primary goal in each of the two cases was establishing a differential diagnosis of autism and/or severe learning difficulties (see chapter 7). As mentioned above, these professionals shared the current medical understanding (see e.g. Rapin, 1997) that these syndromes had a neurological basis even if this could not be identified with current technology; there was no evidence of a consideration of the possible cause being psychodynamic as at Site E.

The behavioural model at Site M

C1 and S1 added a *behavioural* dimension (see Figure 8.3.1, above) to the application of the disease model, which S1 termed a "developmental approach":

> S1: You're trying all the time to look at the different skills that the child has, and to put a comparable kind of age level on it, and to see if they have a fairly even profile or whether it is an up and down profile for any reason ... (M1int.S1)

Thus, in both cases, C1 and S1 dedicated substantial effort to determining the functional levels of the children in a variety of areas in view of making recommendations to the parents and local services on effective support strategies for helping the child to progress (see subgoals in M1/2Prot.e - Appendix IV). In the interviews they suggested that this was their main model: thus C1 reported that in Amy's case there was an unusually strong concern by the parents on medical issues which they had to address. A focus on medical

investigations also occurred in the case of Betty due to the parents concern with the possible effects of the MMR immunisation. The results thus show that, despite the espoused interest in behavioural issues, the professionals at this tertiary level neurodisability centre were caught in the disease model attributed to it by the referral agents - both parents and local services. The behavioural aspects were a complementary issue. Thus, in Amy's case not much effort was given to the profile of her skills and educational support because these were already being catered for. In Betty's case, on the other hand, while the parents again sought medical advice, the professionals dedicated more effort to a description of the child's level and pattern of skills and to the most appropriate provision of support for her progress both at the professionals-only evaluation and final parent meeting.

8.3.3. The application of psychodynamic and behavioural approaches at Site E

8.3.3.1. Disease model in background at Site E

At Site E, the disease model was activated but only in the background. Thus Y appreciated the presence of medical personnel, who were absent in both cases under review, because of the possibility of checking for organic causes (E1int.Y). In both cases there was a search by the EPs for possible physical causes such as birth complications, and in E2 the hearing problem raised by the medical report was considered. There was also a consideration of family medical history regarding Amy: the check that the sibling had no developmental problems. Yet, because the disease model was not the main approach, there was no reference to the limitations of science in determining the nature of the disability.

The contrast was evident in terms of the lack of subgoals on medical problems at Site E while these were substantial at Site M (see #7.2.3, above).

8.3.3.2. The application of the psychodynamic model

At Site E, the "organic" cause was considered as only one possible explanation. The primary assumption put forward by the psychotherapist was that there was a psychodynamic cause. Y assumed there were two kinds of autism, one organic and one caused by a failure in relationships, and the latter factor was always present to some extent:

> Y: ... Or one [form of autism] that can be organic plus environmental. ... there are some children that I have seen who have remained [with difficulties], there has been a slight cognitive deficit at the end of it. But they have gone back into mainstream school, they have friends, they are in a relationship, they have developed humour, they have developed a bit of capacity for play, a capacity to interact. (E2int.Y)

In the case of Cathy, the organic possibility was buried completely. Y turned the separation trauma of the child into the dominant explanation of the child's difficulties, so that autism as an explanation within the disease model was put aside (see chapter 9). The child's preference for green and the child's hand mannerisms were interpreted as coping mechanisms for the unconscious pain of her trauma, rather than as part of her impaired imagination (and autism) as one would have expected at Site M.

Even in the case of David, whose behaviour had, within the disease approach, already been diagnosed as falling within the autistic syndrome, Y was not sure she would see the cause of his difficulties as organic:

> Y: ... I thought he had autistic features, but I actually cannot say more than that in that meeting ...
>
> I: You didn't conclude that there was something organic, or....
>
> Y: No. (E2int.Y)

In fact, even in this case, Y focused the discussions on an interpretation of the child's attempts to cope with the situation rather than using the repetitive behaviours for classification of the child's difficulty.

EP1 also recognised and appreciated Y's different approach to understanding the child as an important contribution to the assessment as a whole, that is apart from the decision as to whether psychotherapy was to be recommended. Thus she still spoke of David's emotional needs (E2int.EP1).

8.3.3.3. The application of the behavioural approach

While the dominant status of Y highlighted the application of the psychodynamic approach at Site E (see #9.2), the other professionals were by training oriented within another approach which they themselves termed a *behavioural* one. It was explained by EP1 as contrasting with the psychodynamic one in its focus on "skills".

Contrasting psychodynamic and behavioural explanations of child behaviour

In Cathy's case, two clear contrasts between the two approaches occurred with regards to what aspect of experience influenced the child's behaviour.

When talking about the child's possible traumatic experience on being sent to Thailand away from her parents, Y stressed the emotional impact of the child's loss of her only existing relationships, while A stressed the impact of a drastic change in the physical environment (see Table 8.3.3.3, below).

Similarly, Cathy's hand mannerisms were interpreted by Y as current coping behaviour in terms of "sensation seeking", while A sought to explain it in terms of habit learned from experience in the use of chopsticks (see #9.2.4, below).

Table 8.3.3.3
Psychodynamic and behavioural explanations of the Cathy's traumatic experience on being sent from London to Thailand

Y: Psychodynamic focus on *relationships*	A & EP2: Behavioural focus on *physical environment*
Y: Most of her environment changed drastically at 15 months, when she lost her mum and dad, and she must have felt very lonely. It makes sense that she should be trying to control her environment now not to feel #?? ??	
	A: I would also# like to know when she went back to Thailand, did she go to Bangkok, which is a very noisy city, or did she go to a rural area where there is more space. EP1: Yes. Those are details we have to find out. A: So what does he do the child that goes from living over a restaurant.
Y: And if there are only two people you really know ...	

Contrasting foci of the two approaches on intervention

The nursery principal (H) explicitly contrasted the behavioural with the psychodynamic approach in terms of their applicability to intervention with the child. H had studied behavioural psychology and was explicitly irritated by the dominance of the psychodynamic approach to explaining Amy's difficulties. She was irritated by the narrowness of the approach that assumed the problem was solved because they had found "the reason" in Cathy's separation in infancy. She recalled similar "discoveries" in other cases as when the manifestation of the child's difficulties were found to have occurred around the birth of a sibling.

Moreover, while she appreciated the psychodynamic model as a different clinical approach which might be useful, she saw it as not applicable to her own task of supporting the child's progress. She found it useless to indulge in interpretations of the child's unconscious: for her, Cathy's preference for green blocks was not an indication of her search for security but rather that "Cathy is able to make a few choices about things, which is great" (E1int.H).

H found her own explicitly behavioural approach as more relevant to supporting the child. Her guiding image was typically that of a "sculptor":

> H: ... we have to help her develop and move on, so that I will be working with, you know, if I was a sculptor, I would be working with the block of marble, and I would be making something from it, and that's the basis I work from. (E1int.H)

Thus, within the behavioural approach, the search for bio-physical and psychodynamic causes was seen as irrelevant to educational intervention. What was assumed, instead, was that children's current behaviour had been learnt, and so it could be moulded into progressively more appropriate behaviour by acting upon the child's current behavioural strengths and weaknesses.

Further instances on how the psychodynamic and behavioural approaches were applied in Cathy's case are given in chapter 9.

8.4. Application of knowledge schema subject also to six other interpretive schemas

The multiplicity of professionals' clinical judgements were not related only to different disciplinary knowledge models. There were several other *goal* and *negotiation* frameworks which influenced diagnostic formulations. These will be illustrated through Betty's case.

8.4.1. Conflicting formulations of Betty's diagnosis

In Betty's case, there was explicit disagreement about the diagnosis both among the professionals and between the professionals and parents. Thus very relevant data was provided for analysis of the different schemas within which the disagreeing participants were constructing their views.

As explained in Chapter 6, Betty's parents had not yet been given any diagnosis, and were also seeking an opinion on whether her difficulties had been caused by the MMR immunisation. From the referral reports, a hypothesis of autism was raised at the all-centre professionals' meeting by one of the paediatricians.

However, the parents' initial presentation of the problem was that Betty had been progressing since the first assessment, putting stress especially on improvement in those areas associated with autism:

> F: We have noticed improvement in her, I think quite significant in the last six months since the report. There was mention for example of lack of eye contact in Dr X's report. And that's gone fantastically. I mean she now looks in your eyes. And she's a terribly affectionate child, isn't she? (M2Prot.b)

During the assessment, C1 and S1 had a tough time trying to engage Betty in any constructive activity, managing only gross motor interaction. C1 was greatly concerned about this failure to engage the child, a failure which had also caused evident distress in the parents:

> C1: ... it's just distressing to say we can't see any progress. She looks, she looks to us just like Dr X described [8 months previously]. ... Not one jot more competent. (M2Prot.d)

A substantial part of the professionals-only evaluation as well as of the parent conference and post-conference reflections was taken up by disagreements among the professionals and between the professionals and the parents about the nature of Betty's difficulties.

8.4.2. Concurrent and alternating activation of six interpretive schemas

8.4.2.1. The six interpretive schemas

The professionals-only discussion about Betty showed shifting applications of at least six different interpretive schemas that influenced the application of the use of knowledge frameworks in the diagnostic process (see Figure 8.4.2.1, below):

Four GOAL schemas: two client schemas, and two assessment purpose schemas:

(a) the *parent-support schema* for ensuring a helpful communication of findings to the parents;

(b) the *services-support schema* for acting within the constraints of the support services;

(c) the *resource-getting schema* for ensuring that decisions led to the child getting the best possible resources; and

(d) the *legal-accountability schema* which may have highlighted the focus on the knowledge schema over the parent-support schema in this case.

Two inter-professional NEGOTIATION schemas:

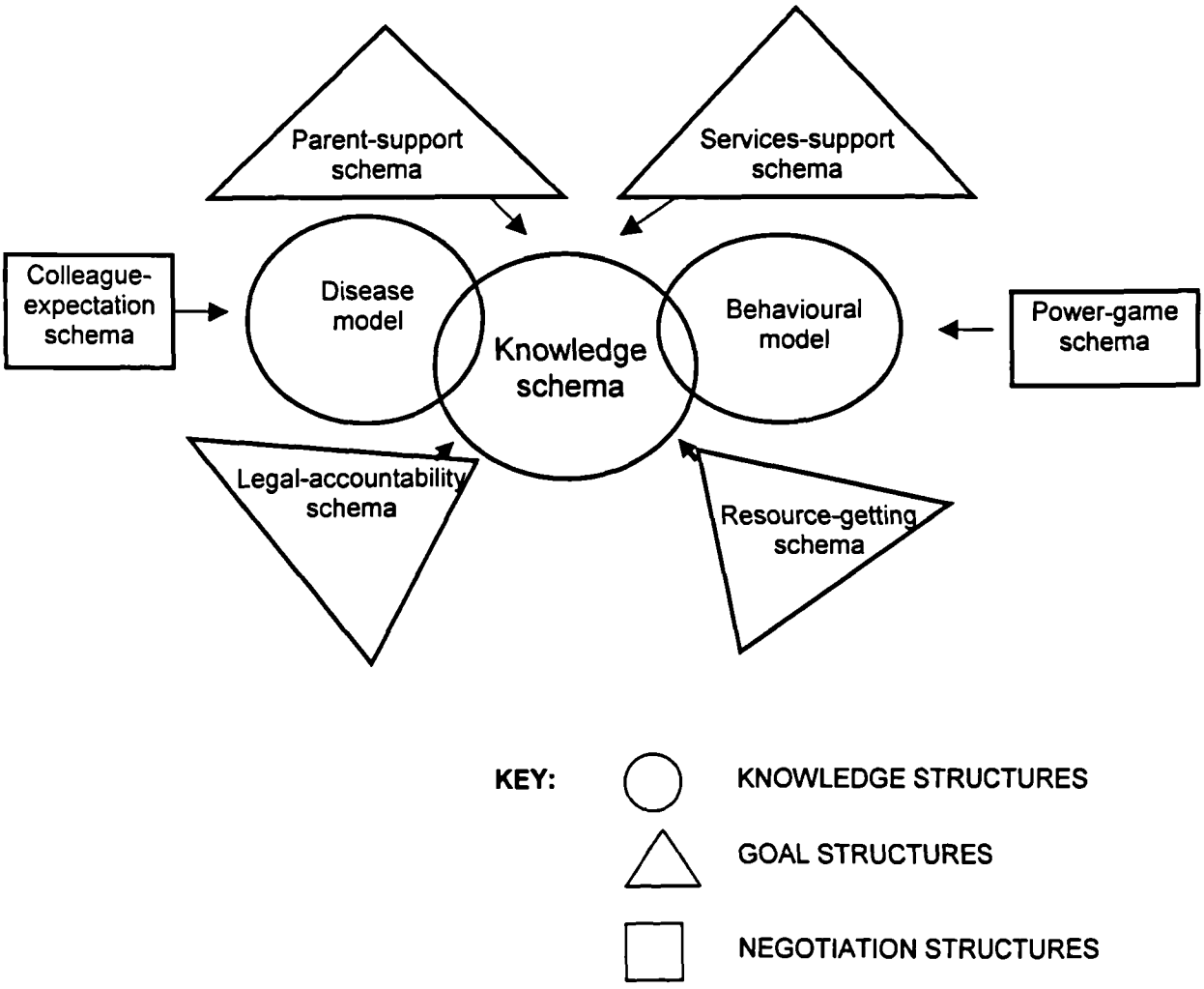
(a) the *colleague-expectation schema* for adjusting one's judgement to the way one thinks a colleague's judgement would be; and

(b) the *power-game schema* for insisting on one's view to maintain one's status of superiority.

The following account illustrates how the knowledge schema and the six interpretive schemas were applied in the professionals-only evaluation meeting of M2. On the basis of the child's performance during the assessment activity, S1 had decided that Betty had severe learning difficulties but not autism, but C1 and P had decided the child had autism as well as severe learning

difficulties. The development of the decision on which formulation was to be applied showed a constant shifting of schemas.

Figure 8.4.2.1:
Four *goal* and two *negotiation* schemas in addition to two *knowledge* schemas activated by the professionals in Betty's case



8.4.2.2. Shifting between knowledge and colleague-expectation schemas

Two schemas were activated at the beginning of the discussion before the mention of a diagnosis was made. On the basis of the child's performance during the assessment activity, S1 had decided the diagnosis was severe learning difficulties (*knowledge* schema) and expected agreement about it from C1 (*colleague-expectation* schema). She was the first to give an implicit indication of her diagnostic conclusion by stating she did not expect them to disagree about the diagnosis (*colleague-expectation* schema), to which, however, C1 responded through a professional evaluation of no progress in child (*knowledge* schema):

> S1: I don't think we're gone to have a fight on this one, actually (laughing).
>
> C1: No, well, it's just distressing to say we can't see any progress. ... (M2Prot.d)

S1 responded by immediately shifting along C1's *knowledge* schema to make a case for global delay: she built on C1's statement of Betty's very low functioning, and went on to say this was a general pattern: no isolated skills, social and communication skills not worse than her nonverbal skills. But this knowledge-based conclusion was challenged:

> S1: She's doesn't have any, you know, isolated skills, either. She's not got puzzles or anything like that. ...
> .....
> And she is not using objects functionally, you know. So where are we? 10 months?
>
> C1: Yes.
>
> P: Hm.
>
> S1: So she's a long, long way behind.
>
> P: Hm.
>
> S1: And ... she turn takes with balls, she looks at you, she laughs, all ready steady go things, her eye contact is quite normal
>
> C1: Is it? (M2Prot.d)

C1 and P had decided that Betty's difficulties were within the autistic spectrum (*knowledge* schema) (M2int.C1&P). They expressed their disagreement about S1's suggestion that Betty's eye contact was normal and her social interaction skills were within her other levels of skills. C1 then shifted back to the *colleague-expectation* schema and S1 answered within the same frame (see italics):

> C1: ... Are we disagreeing?
>
> S1: I don't know. What *do you want to call her?* (M2Prot.d)

In response, C1 and P shifted into the *knowledge* schema to argue that Betty had autism, while S1 opposed on the basis of the *colleague-expectation* schema of interpersonal disagreement (see italics):

> C1: I would say she is autistic, as well as, generally developmentally delayed.
>
> P: I think so.
>
> S1: See *for a change, I wouldn't. (laughing) I normally go the other way.* ** I simply
> *
>
> C1: I think her social communication is very poor.
>
> P: Hm. That's right I think. (M2Prot.d)

To back her *colleague-expectation* argument, in fact, S1 referred to a case the week before, where the child had a more varied pattern of skills, with communication significantly below other skills, and C1 had insisted on not calling the child autistic but rather globally delayed.

C1, however, withdrew from that schema, making no comment. She allowed P, who laughed off that schema as she had been absent - "I cannot enter into that" - to reactivate the *knowledge* schema. P argued forcibly that Betty's social interaction skills were poorer than her other skills:

> P: ... if she was at the 10-month level, you would expect more use of gestural, em, sort of interaction to get attention and so on. It's very, she's very on her terms isn't she? And she's much into one thing; she's quite focused on it, quite inflexible in that way, isn't she?

S: Yeah, yeah.

P: She gets locked into one thing, doesn't she, and won't let you come into it, gets cross if you do.

S1, on the other hand, shifted between the *knowledge* and *colleague-expectation* schemas. She first referred to a conclusion C1 and P had reached earlier that even Betty's motor skills were delayed:

S: I suppose it's just that she looks younger like with motor skills being younger. You know autistic type children look sort of much more normal. (M2Prot.d)

She then argued that Betty did not show any use of visual cues as children with autism usually did (*knowledge* schema) and went on again to appeal to the case of the previous week *(colleague-expectation* schema). But C1 again strongly refuted the shift, saying she had "a complete blank in my head where X was," despite S1's attempt to recall the case. S1 gave up her *colleague-expectation* schema.

8.4.2.3. Activation of the parent-support schema

At this point, P brought in the *parent-support* schema: how were they going to put it to the parents? All shifted into this frame. S1 was cut short from elaborating it by C1. C1 reiterated the use of the autism label, but modified the strong formulation, possibly activating concurrently the *knowledge* schema (there were instances when her diagnosis had been proved wrong), the *parent-support* schema (parents had not heard label before), and the *colleague-expectation* schema (S1 had strong doubts). The application of the three schemas by C1 at this point was elaborated at the post-assessment interview:

C1: ***[colleague-expectation schema]*** Well, I was surprised by S1's strength with which she said that she hadn't expected me to say that the child is autistic, so I suppose I did tone it down a bit.
[parent-support schema] And then as I talked, I thought well actually that's a bit hard on the parents, they haven't raised it, they, in a way they've implicitly talked the opposite,

[*knowledge schema*] and I don't feel that I know what I should do, I am prepared to take a bet on how she would develop in the next two years, but I've been proved wrong before,
[*colleague-expectation schema*] so it wouldn't be impossible that in the end S1 will be right that she won't be particularly autistic, that is a possibility. (M2int.C1)

8.4.2.4. Activation of the resource-getting schema

During the discussion, however, C1 had then shifted to the *resource-getting* schema: they needed to indicate her autism in order to ensure input emphasis on social and communication skills. All again shared the frame. S1 brought up the possibility that the use of the autism label might or might not be useful. However, C1 was backed by P in the need to use the term within that frame:

C: So we could say that we think social communication is difficult for her, and that all the effort should go into communication and social communication and not to spend time shoving around to do puzzles because she will soon learn that herself

.....

P: Because the other thing is if, if she is, it's going to make a difference in the input locally, isn't it, if we say that the emphasis is on the autistic. (M2Prot.d)

S1 then shifted back to the *parent-support* schema - the shift causing initial lack of understanding by P (see italics) - to challenge, for a final time, the use of the autism label. But P activated the *knowledge* schema in support of using the label. Thus the decision remained that the label be used with the parents, though in a softer, tentative, form. P was talking about the appropriateness of a special needs nursery for Betty:

P: It would be good for her [Betty] to

S: It's a horrible word for her ?? ??

P: *What? Autistic?*

S: The woman's pretty strung up isn't she?

P: Yes. But, I mean if you look at her early childhood.

S: Especially if you had to describe some of the things she's doing. Lack of

P: What strikes me is her, her communication ..... the thing that you really can't get in to her, can you .....

S: Yes, it is. (M2Prot.d)

8.4.2.5. Activating the services-support schema

Within the above discussions on what relevant support they could recommend for Betty, another schema was activated, namely the local *services-support schema*. This schema had already been used in determining the goal of giving a diagnosis: it was what they implied the local services' referral concern was. At this point it was activated in considering only recommendations that could be met by local services. Thus, following the use of the *parent-support schema* in recommending the mother's great need for support in helping the child to learn, there was a 6-second pause (**), and then S1 activated the *services-support schema*, which was taken up also by C1 and P (see especially italics):

P: ... Certainly the mother needs a bit of a break, doesn't she?
**
S: I don't know what they have facility wise.

C: Oh, it's that XX nursery.

S: Oh, it's that patch, isn't it. Oh right. Oh that should be fine there.

C: Yeah.

S: But they wouldn't take her if she is 2 ½

P: They do it quite often with special needs

S: We could ring and find out ... (M2Prot.d)

8.4.2.6. Conflicting schemas

The conflicts between *parent-support* and *services-support* schemas was evident in the professionals' post-assessment reflections: they decided to take up action regarding the way the paediatrician had dealt with the case.

The main issue in these reflections, however, concerned the conflict on how best to be helpful to the parents - both within the *parent-support* schema and in its conflict with the application of the *knowledge* schema. S1 had seen their action as failing to meet the requirements of the *parent-support* schema since the parents rejected the diagnosis (M2int.S). And she carried P with her in saying that more weight should have been given in this case to the *parent-support* schema. The label might have been more effectively applied at a later review:

> S: I just didn't think that she was ready, ready for a label, but I don't know, it's very difficult.
>
> P: No, I find it very hard as well, actually. What, what's? Because you also worry if you tell people something like that, all they remember when they get away is
>
> S: Is the label
>
> P: You know, and it's the memory of being told (M2Prot.f)

C1 was absent during these reflections. She too was tuned in to the *parent-support schema*. But she assumed a different position: the parents needed to be faced with a realistic picture of the child's difficulties. So she thought of meeting their needs by having the whole team present "one story". She lamented that these parents had not been served well by the local services who had not given them any diagnosis. Thus she saw the application of the *knowledge* schema as the right approach also for supporting the parents.

8.4.2.7. The power-game schema

Though with less straightforward evidence, one can also interpret the above discussion within two other schemas. Firstly a *power-game* schema applied by C1 and S1. These had made two opposite judgements individually, but then had to come to a consensus. One may see the series of arguments for or against using the autism label for Betty within the four goal schemas mentioned above as arising from the *power-game* schema of getting one's

view accepted. C1 was the senior as recognised also by P, and she carried her view. The only direct evidence of this schema was found in C1's expression of disapproval (at the post-assessment interview) of S1's action in offering a review assessment within a year to the parents. She felt S1 should not have made the offer since in their previous meeting together the professionals had not made such a decision (M2int.C1).

8.4.2.8. Unusual dominance of the knowledge schema over parent-support schema

The discussion in this case showed the dominance of the use of the *knowledge* over the *parent-support* schema.

First of all it should be noted that C1 did not abandon the *parent-support* schema. Within that schema, parent needs might be assessed differently. Though the parent reactions suggest that C1 had applied the *parent-support* schema more effectively with Amy's parents than with Betty's, C1 saw her actions in each case as both possibly helpful or unhelpful to the parents, depending on what the parents needed and what they made of the professionals' opinion. In Amy's case, C1 was worried about having given them too optimistic a picture, while in Betty's case she worried that the parents might have been too shocked. And indeed, she planned and took corrective action in both cases (M1Prot.f and M2.Protf) to ensure help for the parents in their coping process: in Amy's case she asked P to include an explicit statement that the child had "*severe* learning difficulties" in the report P sent to the local paediatrician; and in Betty's case she planned to contact local services to ensure quick local counselling support to the parents and services to the child.

However, S1 saw C1's position in the argument on Betty's diagnosis as "unusual". C1 usually preferred not to use the autism label in a case like Betty's, both within the *knowledge* schema by saying the cognitive side of

learning difficulties overshadowed the communication difficulties, and also within the *parent-support* schema because she wanted to avoid labelling as far as possible:

> S: ... I am confused now because ... I would have said that it was more the cognitive levels that she was taking her mark from, where I was taking it from a much more sort of communication point of view ..... I found it slightly unusual too because C1 is not the type of person that normally wants to give labels. Working with her before, she's gone much more softly, softly on a more and even got quite cross with the doctors for making big ... (M2int.S)

In another case of an older child observed, but not used in this study, S1 raised the possibility that the child might be autistic, but the idea was not taken up by C1 or the other paediatrician. Why did C1 adopt an unusual approach in Betty's case?

8.4.2.9. The legal-accountability schema

The participants themselves were not sure why this happened. C1 herself reported noting that in Betty's case "social communication was a very big problem. Therefore we would have to mention that she could be on the autistic spectrum" (M2int.C). And S1 also thought C1 was "pushed" in the direction of autism by the lack of eye-contact. But, as has been shown, the level of sureness about the diagnosis was not strong. P too thought she might have given up the label if C1 had not insisted on it (M2int.P). Moreover, given that the child was only 2½ years old and the professionals' explicit reflection that the parents did not seem to have been told about autism as yet, it was surprising that C1 insisted on using the label. C1 was surprised at herself and felt the need to explain her behaviour: in the post-assessment interview, she reported tending to "shift all the time about how I think about things" (M2int.C1).

The participants' own difficulty in interpreting why C1 insisted on the diagnostic label points out the difficulty of this study in trying to interpret the process.

However, one looks for unusual circumstances that might have given rise to unusual decisions. The recording of the discussion for research might have given rise to a research-oriented schema: in the first place S1 might have moved into the *colleague-expectation* schema and changed her usual diagnostic inclinations in wanting to avoid a recorded disagreement.

On the other hand, C1 might have been influenced in her judgement in this case by a *legal-accountability* schema which led her to orient more strongly to the *knowledge* schema. C1 had made a reference to the father being a solicitor in the initial referral meeting, and made two spontaneous references to legal issues in the post-assessment interview (while no mention of this was made by S1):

> C1: ... I noticed that the father was a solicitor. ..... I sort of thought that they might be wanting to sue somebody or be part of a pressure group for the help of something and in some way use our opinion in a legal sense ... (M2int.C)

Moreover, S1 herself noted that the *knowledge* schema was dominant in the assessment. When S1 was asked why she did not insist on not using the autism label regarding Betty, she said she thought the discussion was concerned with "professional issues" about diagnostic criteria rather than on how best to tell it to the parents:

> S: ... at that time it seemed more to do with a professional issue, a lot of criteria, diagnostic criteria, labels and I didn't feel strongly about that, I could be persuaded on that point. (M2int.S)

Thus, the evidence suggests that the activation of the *legal-accountability* schema in this case might have led to the dominance of the application of the *knowledge* schema vis-à-vis the *parent-support* schema.

8.4.3. The *child-support* schema

Different combinations of the above schemas were applied in the other protocols and cases. The above illustration serves the purpose in this study of identifying the possible complexity of their application. However, an account will here be presented of the occurrence at Site E.1 of an additional schema that was not evident in the above protocol, namely the *child-support* schema.

In Cathy's case, H and T1 noted that EP1's strong statement to the parents that their daughter's difficulties were caused by her separation from them put the blame too strongly on the parents. EP1 showed no awareness, even in the interviews, about the possible impact on the parents of her stance. It seems that in this case, EP1 was focusing on the child as the client rather than the parents. She felt she was being positive in stating that the child had the potential for 'normal' development because the cause of her problems were inadequate emotional parent support rather than stable inadequate traits in the child. But, if she had been within the *parent-support* schema, she would have recognised the guilt this interpretation was reinforcing in the mother:

> M: After she stay with me three or four month, she play with me like a normal.
>
> EP1: It sounds as though that event when she stayed with your sister and you came back here was very important for her, emotionally
>
> M: Yeah.
>
> EP1: And it was a huge shock to lose you because for a child of that age if you disappear you don't exist, you know, you have gone, she has lost you; and, hm, it was a huge hm traumatic event for her; and when you described bringing, coming back - and twenty months is a long time - she ignored you to begin with, but gradually accepting and getting to know you again. I think there's a huge emotional bit to her development here ... (E1Prot.e)

The enthusiasm with which EP1 was applying the knowledge psychodynamic schema to an explanation of the child's difficulties seems to have been fuelled by the feeling that this was good news for the child (*child-support* schema). For the parents it was two-edged: they were happy to be told the child could

regain normality but reinforcing their guilt feelings that they had brought about her difficulties.

This contrasts sharply with the *parent-support* schema activated by the Site M professionals with regards to Amy's parents' question whether antibiotics taken by the mother during breastfeeding had been the cause of her difficulties (see italics):

> S: And are you [P] going to say anything about the antibiotic thing?
>
> P: I can do. I don't think there's any evidence for that.
>
> S: You don't want to dash their [parents'] hopes.
>
> P: *But it gives the mother so much guilt then about having taken something when she was pregnant, after she was pregnant when she was feeding.* And there is no evidence to say that [antibiotics during feeding a cause]. *And to say that this happened because of something you took while you were feeding your baby is just awful.* (M1Prot.d)

In fact P strongly emphasised to the parents that there was no evidence for antibiotics taken by the mother affecting the child. The parents did not react to this statement. But in the post-assessment interview with the father only, he strongly refuted P's argument stating how doctors were now cautious about prescribing antibiotics to breastfeeding mothers.

Thus, these contrasting interpretations of possible causes evidence the different clients being served by the professionals in the two cases.

- For the professionals at Site M, the parents were the primary clients, and so a possible cause brought about by the parents was discounted in order to reduce parent guilt.

- At Site E, the school was the primary client for the key-worker psychologist (EP2); and for EP1, who had no relations with the school, the child became the foreground client. Thus a possible cause of the child's difficulties

brought about by the parents was highlighted in order to raise hope for the child's progress.

8.5. Conclusion

This chapter has provided evidence to show that:

- The diagnostic process was central to the decision making at both Sites: but it constituted the foreground and was an end in itself at Site M, and constituted the background and was only a tool for deciding about the child's placement at Site E.

- Three knowledge models were applied to the explanation of the problems: the *disease* model mainly at Site M, and the *psychodynamic* and *behavioural* models mainly at Site E.

- Seven other interpretive schemas coloured the professionals' application of their disciplinary knowledge schemas: five were related to different *goal* frameworks (three different clients, and two different purposes of the assessment); and two were related to different *negotiation* frameworks: the *colleague-expectation* schema and the *power-game* schema.

The next chapter will focus on the evidence for the impact of the *negotiation* structures on the decision-making process.

Chapter 9

RESULTS IV: THE IMPACT OF INTER-PROFESSIONAL AND PROFESSIONAL-PARENT NEGOTIATION FRAMEWORKS ON THE DECISION-MAKING PROCESS

9.1. Introduction

The previous chapter identified eight schemas within which professionals developed their decisions during the assessment.

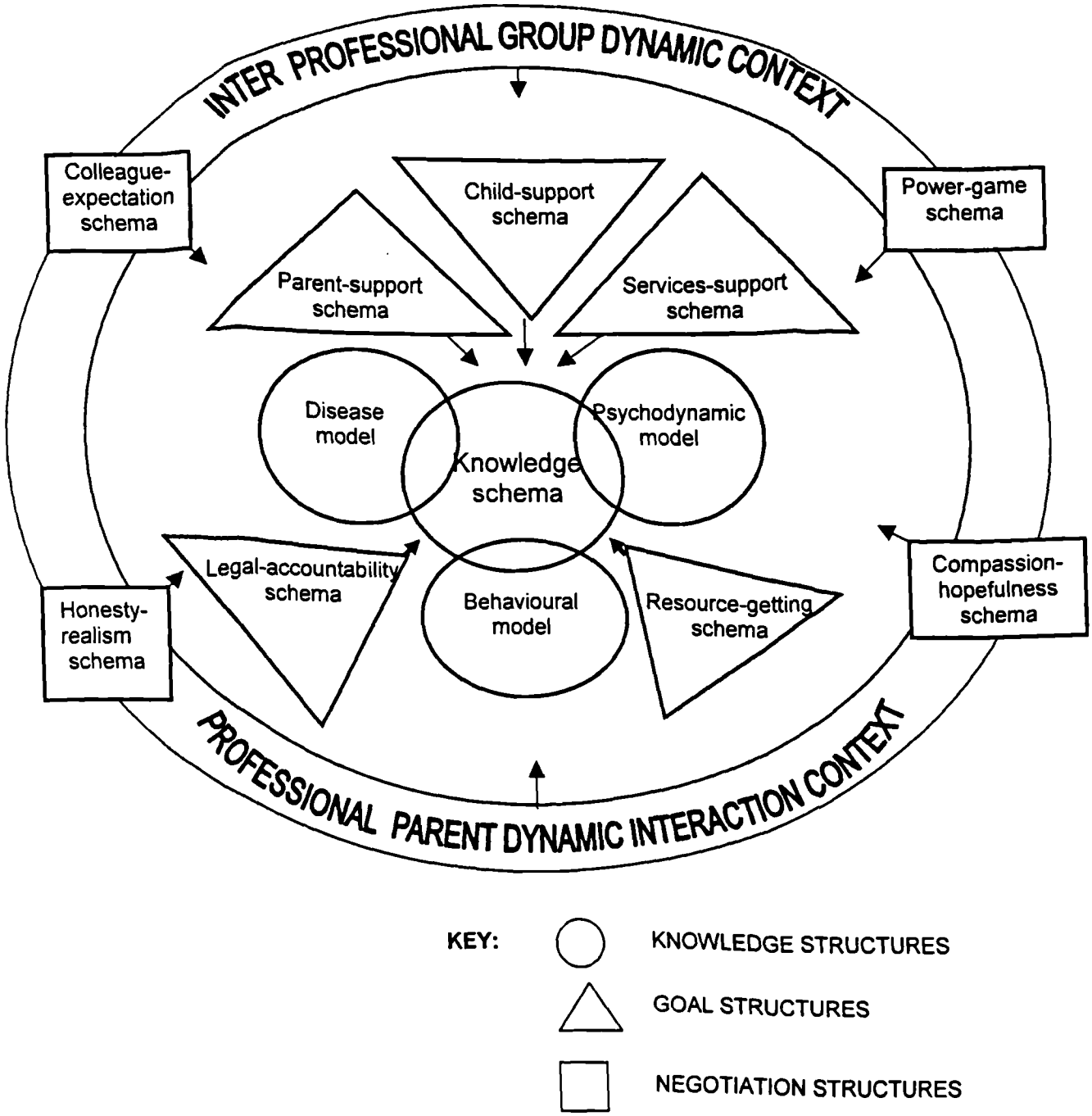
Two of those schemas (the *colleague-expectation* and *power-game* schemas) showed the influence of the application of *negotiation* frameworks in the problem formulation among the professionals at Site M. This chapter focuses directly on the application of these negotiation schemas at a wider level in the decision-making process at both Sites.

The wider *negotiation* framework is represented in Figure 9.1, below, through the double rings surrounding the *knowledge* (circles) and *goal* (triangles) schemas identified in the previous chapter. As shown in the figure, the *negotiation* frameworks will be reported in two sections:

- *Influences of the inter-professional group dynamic context.* The inter-professional *power-game* schema will be illustrated through the way informal group leadership led to the adoption of the psychodynamic model as the dominant explanation of Cathy's case at Site E. Site E had a larger grouping of professionals with two concurrent rival approaches to disability where the impact of group dynamic influences on decision making could be more easily identified. This case thus fitted the purpose of this study to identify processes in action.

- *Influences of the professional-parent interaction context.* The *colleague-expectation* schema is here illustrated through its application to the negotiation of joint professional-parent perceptions of the child's disability mostly in the Site M cases. Site M is appropriate because this negotiation was central and problematic to the decision making in both Amy's and Betty's cases, where the parents were articulate and assertive and their concerns were given wide space by the professionals. In Cathy's and David's cases, the professional-parent interaction did not raise any explicit important issues for the assessment and were thus less relevant to this study's search for the identification of potentially important frameworks.

Figure 9.1:
Knowledge, goal and negotiation frameworks in multiprofessional assessment of disability



9.2. The inter-professional group dynamic structure

9.2.1. Evidence of influential informal group leadership at Site E

As explained in #6.3 above, the two Sites had different institutional contexts, group structures and team histories. While at Site M there was one major shared *disease* model of disability and a shared concern on supporting the parent coping process, at Site E there were two concurrent major models that were perceived as tapping different aspects of the child and family difficulties.

Moreover, in Cathy's case, the impact of Y's dominant influence was explicitly noted by at least two of the participants themselves (EP2 and H - see #7.3.3 and 7.4.2 above). H was explicitly irritated by the dominance of her perspective.

The following is an attempt to illustrate how informal leadership was exercised through three group processes:

- achievement of high status in the group through exclusive expertise recognised by the formal leadership;
- the paradoxical highlighting of a single focus within a transdisciplinary decision-making process;
- the process of maintaining the dominance of one view over others through its assertion and the discounting of rival views.

9.2.2. Status in the group: authority of expertise recognised by the chair

Y was not the official leader of Site E. But she exercised her influence through her expertise in the psychodynamic approach which was fully endorsed by the actual conductor of the group (EP1), and also partly shared by the other core member (A - see #6.3, above).

Chairing authority lay with EP1 as the initiator of the Site E system who attended the assessment as "facilitator" of the event. She was also the supervisor of EP2, who was the key-worker in Cathy's case. Though EP2 was formally designated as the conductor of the case, his chairing was subject to EP1's constant monitoring and indeed censorship. This was evident throughout the protocols, but was obvious when she authoritatively dismissed his raising of the mother's concern (about the child's diagnosis as autistic) at the parent conference as being inappropriate for the Site E forum (see #7.3, above).

On the other hand, EP1 never censored Y in this way. She explicitly recognised Y as "a very experienced child psychotherapist". Y was allowed complete freedom to decide for herself whether the child and family would benefit from psychotherapy: she was never asked to take on a child unless she volunteered.

Moreover, EP1 had also developed a particular liking for the psychodynamic approach, partly as a result of her working with psychotherapists at Site E over the past six years. She appreciated how Y "really sort of absorbs the child's essence in terms of the psychodynamic aspects of her emotional development in a way that the rest of us don't ... We all really miss her when she is not here" (E1int.EP1). Thus Y's questions and comments found a strong resonance in EP1.

9.2.3. Paradoxical single focus on orientation of own discipline and values

Furthermore, within the transdisciplinary situation, Y paradoxically was more focused on her own orientations. This phenomenon had been explicitly mentioned in the pilot study: the speech pathologist had reported that when he worked on a case individually, he had to adopt a comprehensive view of the child, but when participating in a multidisciplinary assessment he could take on

his more specific role regarding assessment of communication and leave the other aspects to the experts from other areas.

Y explicitly regarded it as her role at Site E to influence assessments towards a greater appreciation of the "emotional" aspects of the children's development, in addition to deciding whether psychotherapy should be offered. In the Site E cases she always came with a pre-set hypothesis that the child's difficulties were significantly influenced by her emotional and relationship experiences. She linked her disciplinary orientation to a strong belief system based on an appreciation of the child's struggle for meaning and the potential to overcome difficulties associated with autism if remedial help was provided in early childhood (see #6.3 above). These put the child as the main client who needed to be supported against the inhibiting constraints of the educational system which she could challenge rather than submit to as an outsider.

Her style was in contrast to the rest of the group. She was seen as "sitting back and quiet" and was soft spoken. EP1 and others butted in with comments on a variety of issues, but her interventions stood out in their focus on singular aspects: the child's current and past relationship experiences, the child's attempt to cope with unconscious difficulties, the subjective meaningfulness of the child's inappropriate responses and initiatives (see Appendix IV.3, p. : Subgoals structure in E1 and E2, and Table 9.2.3, below). The analysis showed that she in fact actively introduced, maintained and established her approach as the dominant one in Cathy's case.

Table 9.2.3: Y's focused interventions in Cycle 1 about Cathy

Seeking information on relationship experiences	Interpreting child's behaviour as relationship building
1. Y: S2, could I ask a question? You said that originally you saw her one-to-one. S2: Yes. Y: How did she respond to that as compared to the group? 2. Y: Does she engage in relationships, in the one to one situation?	
	3. S2: And as long as it's someone that she knows, she seems quite comfortable. She doesn't scream, she doesn't struggle. Y: So there's a sense that she's a child that is left to her own resources? 4. S2: She knows she has to do that for me now, so she goes "Ah, she wants me to do that." Y: That's interesting, though, because she's then doing something for you.
5. Y: I was just wondering if there's something, a problem that predated the 15 months?	
6. Y: Do we know anything about the relationship with the sister that she stayed with, anything about the relationship when she left?	

In the first referral Cycle, Y asserted her psychodynamic hypothesis by sticking to her singular focus throughout (see Table 9.2.3, above). After listening quietly to the initial referral questions from the EP and a description of S2's attempts to get responses from Cathy in one-to-one sessions, Y put in a question about Cathy's response to social approaches; she restated her question when the discussion moved away; made two interpretations that focused a substantial part of the discussion on the child's relationship experiences; she concluded that Cathy had developed a way of coping with being left "to her own

resources", and that she had some capacity for building relationships; she then focused the group on a search for Cathy's separation experience in toddlerhood (see Table 9.2.3, above).

9.2.4. Exercising control by asserting own and discounting other perspectives

Y's influence was also exercised through her request for particular ways of organising the assessment activity, namely that there should be an initial unstructured session where the child is in free play, and that the parents should be encouraged to interact with the child.

Moreover, she then practically monopolised the observations behind the screen (Prot.d1) and the professionals-only discussion (Prot.d2) about the assessment activity, initiating 50% of the total episodes, again with the same focus (see Table 9.2.4, below).

The way Y controlled the discussion in the professionals-only evaluation also becomes evident in a turn-by-turn analysis. Thus she started off by setting the episode on a description of Cathy's selection of green objects: "She was very interested in green"; then she set up another episode on its interpretation: "That would make her happy. Overselection. ..."; but then herself changed the topic by ignoring T1's attempt to maintain it. T1 requested a clarification of Y's interpretation of Cathy's green seeking as obsessional behaviour, but Y moved on to a new focus on Cathy's relationship seeking:

> Y: Maybe it's a continuation of her obsessional behaviour anyway.
>
> T: Why is it a continuation?
>
> Y: What I found really striking about her wasn't so much the obsession with green which I understood in terms of being controlling about something. But I'm struck by how many people are saying, you know, `Just to please me'. ... (E1Prot.d2)

Table 9.2.4:
Subgoals, by three foci, set by Y in assessment activity observations (Prot.d1) and professionals-only evaluation (Prot.d2) (12 of total of 25)

Focus on relationships	Focus on emotional behaviour: Interpret unusual behaviour as coping with unconscious trauma	Focus on child's intentional behaviour: Ascribe intentions to child's activities
	SUB d1.02 (015) Y Interpret Cathy's unusual behaviour	
SUB d1.04 (030) Y Describe Cathy's interaction with adult SUB d1.05 (040) Y Describe family relations		
		SUB d1.08 (064) Y Describe Cathy's intentional behaviour
	SUB d1.09 (071) Y Explain controlling behaviour as caused by separation trauma	
		SUB d1.12 (105) Y Describe Cathy's meaningful behaviour
	SUB d1.14 (110) Y Describe Cathy's emotional behaviour	
	SUB d2.02 (022) Y Describe Cathy's interest in green SUB d2.03 (035) Y Interpret Cathy's green seeking	
SUB d2.05 (112) Y Describe Cathy's social interaction SUB d2.06 (117) Y Describe home background SUB d2.08 (147) Y Recommend family psychotherapy		

SUB = SUBgoal (inferred for one episode in the discussion)
d1 = protocol of observations from behind one-way screen;
d2 = protocol of professionals-only discussion after first session.
(015) = Serial number of single-statement sequential segments in each protocol
Y = SUBgoal initiated by psychotherapist

She made a similar controlling move when EP2 tried to follow her line of thinking in the interpretation of Cathy's hand mannerisms:

> Y: It does feel like ?? ?? a lot of control.
>
> EP2: A sort of sensory.
>
> Y: She will allow, she will allow some interaction beginning her play. There's a lot of humour and play. ... (E1Prot.d2)

Y also asserted with persistence her interpretation over the rival behavioural interpretation of Cathy's mannerisms. Note, in the following extract, how she got A to agree with her own interpretation despite A's attempt, seconded by EP1, to suggest that the hand mannerisms might have been *learned* from watching her parents or relatives in Bangkok using chopsticks:

> Y: (To S2) Do you think it's the sensation that she likes?
>
> A: But I'd really like to know how the parents eat at home.
>
> EP2: We must ask them that.
>
> A: Do they use the chopsticks? It's that sort of movement. She may use a spoon at home or use her fingers. But she was also for five months in Thailand. She'll have seen a lot of this kind of movement.
>
> Y: But it sounds like it's now at the service of creating a sensation ?? ?? ??
>
> A: That's right, yeah. (E1Prot.d2)

Y finally also established her interpretation of Cathy's difficulties by taking, on her sole authority, the first intervention decision about the child and family: she was offering them psychotherapy. This was gladly taken up by EP1 who immediately sought for its arrangement with her. As Y had to leave before the final session with the parents, her interpretation of the problem and offer of psychotherapy were further elaborated and passed on to the parents by EP1.

9.2.5. Importance of recognising the domination of one member's perspective over others

In this case, the nursery teacher and principal in the post-assessment interview expressed dissatisfaction with the dominance of the psychotherapist's perspective that was supported by the chairperson of the assessment. They felt that it was not helpful to their task of aiding the child to move forward, and also that the approach was not supportive to the parents who were implicitly given the blame for the child's difficulties.

The basis of this dissatisfaction lies in the evident different concerns of the rest of the group within the behavioural perspective. Thus, before the psychodynamic perspective was imposed by Y, several of the initial subgoals of the parent conference had focused on Cathy's perceptual, play and language skills. Similarly, in EP2's subsequent Stage 4 report, the psychodynamic perspective was very peripheral to the general formulation of the child's problem and relevant recommendations. It was in fact restricted to a specific paragraph on the Site E assessment which did focus completely on Cathy's relationship and emotional aspects and the recommendation for her to have sessions by the Child and Family Service. Otherwise it only featured as the sixth of seven recommendations on 'Facilities and Resources'. No psychodynamic aspects were featured in the list of thirteen areas in the 'Educational Psychologist's Assessment of Child's Functioning'. None were included in the 'Summary of the Child's Special Needs' (except indirectly in one aim: 'to enable her to relate socially to peers and adults'). Instead, EP2 summarised Cathy's "situation" as that of "a child with language delay and communication difficulties who also displays some features on the autistic spectrum" - a statement which he repeated in recommending the type of placement she needed.

This discrepancy between the dominant psychodynamic perspective at the Site E assessment and the dominant behavioural recommendations for supporting the child's progress in EP2's resultant report, raises questions about the appropriateness of the process of the transdisciplinary assessment. Should

one member's perspective be allowed to dominate the way a child's problem is described and explained, especially if that perspective is seen as non-supportive to participants who are engaged in everyday support for the child?

9.3. Professional-parent negotiation as a context for determining the child and family needs

9.3.1. Contrasting frameworks for the giving of bad news at the two Sites

While at Site E inter-professional group dynamics constituted the most important interactive context of the assessment, at Site M there was more evidence on the professional-parent dynamic context as an influential framework for assessment action:

- Given the focus of Site M on answering the parent questions, and that Amy's and Betty's parents were seeking a second or a first specific opinion on their children's difficulties, the communication of the diagnosis and prognosis became central issues.

- On the other hand, given the focus of Site E on the Statementing process, and that Cathy's and David's parents had already accepted the idea of special schooling, the communication of the bad news to the parents were side issues. Thus, A used the term "bad news" in relation to non-availability of the resources needed by David.

The evidence showed that structures for being sensitive to parent feelings about the communication of diagnostic bad news were activated at both Sites, but that these structures differed. While the parents in each case expressed concerns about bad news, Site E activated frameworks for defocusing the bad news issue, while the Site M framework included a search for ways of

communicating it explicitly but in a way that was supportive to the parents (see Table 9.3.1, below).

Table 9.3.1
Different schemas in addressing the dilemma of communicating bad news to the parents

DEFOCUS THE ISSUE; COLLUDE WITH PARENTS	SAY IT SUPPORTIVELY
Site E	**Site M**
Focus on child's individual *improvement only*	All professionals give *one story*
Do not mention the disability condition unless raised by the parents	*Empathise* with parent concerns
	State *positive* achievements first
Site M	*Reassure* parents they are already addressing needs
Collude with parents' search for medical cure	*Align* parents through Perspective-Display-Series schema
	Soften formulation: difficult, conditional
	Focus on *hopeful expectation* of progress and relevant strategies

9.3.2. Three schemas for defocusing the issue of bad news

At Site E, no bad news was communicated to the parents. Instead, the protocols show evidence of two schemas for *defocusing* the issue, which are here termed the *improvement* schema and the *say-it-not* schema. At Site M the issue was more explicitly aimed at informing the parents of the perceived bad news. But when the parents continued to press for a medical cure which the professionals really had excluded, they avoided the polarisation through the *collusion schema* (cf. Aronsson *et al.*, 1995): join the parents in getting into extensive medical investigations and thus postponing the issue.

9.3.2.1. The improvement schema

The *improvement* schema defocused the discussion from describing the child's difficulties to highlighting the progress the child was making. This schema was explicitly activated in Cathy's case. EP2 had noticed significant improvement in the child since first seeing her almost a year previously. At the end of the professionals-only evaluation session, he suggested that at the parent conference, besides thinking about school placement, they "might make an endorsement of those improvements."

This approach fitted in with the mother's repeated view that Cathy was "getting better". Within this schema, EP1 perceived the child's current delayed level of functioning and traits of autism as being temporary, and confirmed the mother's expectation of "normality":

> EP1: ...but on the other hand we're seeing a lot of very normal development. It is delayed, it is not at the age that she is, a lot of her play, but then that may be accounted for by this big gap when she lived away from you and I think was very emotionally withdrawn during that period. (E1Prot.e)

This approach was common also to both parents at Site M and may be seen as *collusive* when adopted by the professionals as well. It may be a healthy way of approaching bad news with its focus on the strengths of the child. It was observed to be the overall schema at a multiprofessional review meeting with the parents in a special school. On the other hand, I myself have had the experience of using the schema and, in some cases, being seen by those working with the child as reinforcing too hopeful expectations in the parents which were perceived by teachers as not facilitating parent cooperation on realistic targets for the child. The issue is problematic, as explained below, because it is related to the parents' state of mind.

At Site E, the *improvement* schema had other unintended consequences on the assessment process. In Cathy's case, ascribing "normal" stable traits to the child and attributing difficulties to environmental inadequacy meant supporting a

hopeful prognosis for the child but putting the blame on the parents. EP1's strong statement on the impact of the separation (see italics) showed little awareness of the latter guilt implications:

> EP1: It sounds as though that event when she stayed with your sister and you came back here was very important for her, emotionally.
>
> M: Yeah.
>
> EP1: *And it was a huge shock to lose you because for a child of that age if you disappear you don't exist, you know, you have gone, she has lost you; and, em, it was a huge, em, traumatic event for her ..... very, very important, I feel, on the emotional front.* (E1Prot.e)

EP1's failure to consider parent feelings was explicitly regarded as inappropriate by T1 and H who had immediately felt the mother was worried and also had direct feedback from the mother the next day (E1int.T, H).

The *improvement* schema was also used at Site M, but as complementary to the delivery of the bad news, and indeed as way of supporting the parents in dealing with it. Thus, in both cases, when the parents were faced with the opinion that there was no medical treatment, or that the child had autism, S1 tried to change focus towards hopeful educational intervention:

> M: Do you have any sort of treatment for that? [assumed brain dysfunction]
>
> P: No medical treatment.
>
> S: It's on the educational, teaching and management that is really the important thing for helping her to improve. (M1Prot.e)

> C1: [Following the delivery of the diagnosis of autism] ... We're not sure, we're really not sure what she may come to look like in two, three years time.
>
> S: With the right, obviously the right kind of input which I think is going to be the crucial thing. (M2Prot.e)

In the latter case, in fact, C1 felt the need to restate the diagnosis of autism to the parents before going on to shift to the *improvement* schema attempted by S1 (as will be explained further below).

9.3.2.2. Say-it-not schema

Another noteworthy approach regarding the bad news at Site E was the *say-it-not* schema: do not bring the diagnosis up unless it is mentioned by the parents themselves. Thus no mention was made of David's autism in the discussions with the parents, even though they had a medical report stating clearly that the child was diagnosed as "displaying many features of the autistic syndrome". And this despite the father's concern about what was wrong with the child (see #6.2.4, above), and his more than one attempt to bring up the question in the final discussion. For instance, after describing his concern that there was something wrong, ending by saying David was "abnormal," his concern was not taken up at all:

> F: ... His behaviour is completely abnormal, you know.
>
> EP4: What is he good at? Is there anything he is actually good at? * Building? Cutting? (E2Prot.e)

C2 explained how the parents' concerns around the diagnosis were ignored:

> C2: They asked a question about how it had happened, they asked why their child was like that and I thought that we could have, and I was thinking about it that in my head, that we could have given a much better than we actually gave as a team, because it made me feel that it was something that they had done and I think that that really needed taking up in some way. (E2int.C2)

This *say-it-not* schema contrasts strongly with the Site M *say-it-supportively* schema of explicitly setting up the goal of informing the parents on the diagnosis, but doing so in a way that would help the parents come to terms with it.

9.3.2.3. Postpone the issue: the Collusion schema

Even though as shall be seen, the Site M professionals did communicate the bad news, when faced with strong parent resistance and the development of

polarised views, they too resorted to another evasive strategy - termed here the *collusion* schema - joining the parents in the search for what they really regarded as an impossible medical cure.

The issue arose in both cases. In Amy's case, the parents persisted strongly in asking for hyperbaric oxygen treatment whereby the child would be exposed to high levels of oxygen in a special chamber. The professionals disapproved on the basis that the effectiveness of the treatment was not proven and that it could be toxic. As the parents persisted in arguing that medical people had accepted it, C1 and S1 told the parents that they could continue to gather more information about the treatment and could then ask them again about its appropriateness.

In Betty's case, too, the mother asked for medical investigations hoping for a cure. P did caution M not to pin her hopes on medical intervention, but as reported in #8.4 above, she ended up reassuring the parents that paediatricians generally felt they "shouldn't leave a stone unturned, if there is any possibility of finding an explanation I think we should look for it" (M2Prot.e). S1 observed how the mother "got hooked" onto the investigations (M2int.S1). M had been impressed by the explanation of how the EEG investigated "electrical activity in the brain" (M2Prot.e). She used the terms in asking for what might have been the impact of the MMR: "I mean, today, what is it in the brain that something, activity?" And she referred to "electrical activity" again in relation to the use of a brain scan. As they were in the end talking about arrangements for tests, M again asked about "that electrical activity thing". And at the post-assessment interview she repeated the term in the context of providing medical intervention:

> M: ... There is some activity going on in her brain. I mean if there is, can there be anything done about it, and if there is electrical activity or something that has brought this upon her, I don't know if they can do anything to help her, medically I mean. (M2int.M&F)

Thus, while the professionals regarded Betty's disability as a behavioural manifestation of deficits in brain physiology that were not amenable to medical

intervention, they in fact colluded with them in pursuing that avenue (cf Aronsson *et al.*, 1995).

9.3.3. Site M: *Optimistic* vs *realistic* frameworks for giving the bad news

At Site M, the collusive schema was used only at the very end of discussions with the parents in order to avoid polarisation. In contrast to Site E, these professionals saw the communication of the bad news to the parents as part of their specialised service though presenting a dilemma. This is a widely recognised dilemma in health settings. While decades ago this issue was widely dealt with through not disclosing the bad news shared among professionals to the patients or their relatives, the professionals at Site M reflected the movement of the debate from "*whether* to tell" the truth, to "*how* to tell it" (Buckman & Kason, 1992).

Figure 9.3.3:
Two frameworks for the giving of the bad news

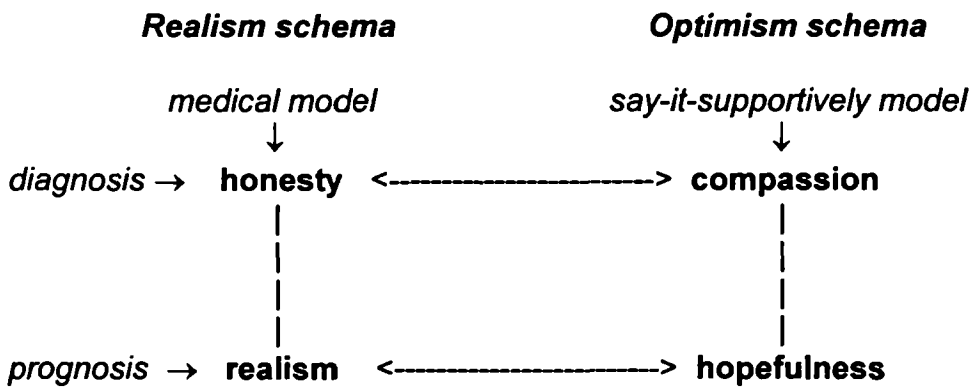


Figure 9.3.3, above, shows the two conflicting schemas the professionals themselves identified: the *realism* schema highlighted *honesty* over *compassion* and *realism* over *hopefulness*. These are presented as extreme poles on two

continua. The figure shows that honesty and realism were associated with the medical model, while compassion and hopefulness with the say-it-supportively model (M1int.C). It also shows that the honesty-compassion continuum was more associated with the giving of the diagnosis, while the realism-hopefulness continuum was associated with the prognosis.

With regards to diagnosis, C1 reported that P had sometimes insisted with her that she be direct in telling the parents clearly that a child had severe learning difficulties. She too was aware that sometimes parents appreciated in retrospect that they were told the diagnosis clearly even though it hurt at the time. But she found it difficult to balance honesty and compassion:

> C: ... You know, I mean parents appreciate honesty but they also appreciate compassion, so, I think sometimes you can't absolutely have both, you know, ... (M1int.C)

In the case of Amy's parents, C1 felt they were in conflict about wanting the truth but at the same time wanting to maintain their hopes:

> C1: ... they did want us to be frank but they didn't, I think they wanted some kind of a picture but one that still contains some hope for them. That their life wouldn't be completely destroyed by looking after somebody that they felt was almost alien to them. (M1int.C)

With regards to Betty's parents, the professionals were aware that they had not been given an appropriate diagnosis, and they were aware too that the diagnosis of autism could have a great impact on them.

During the Parent Conferences, C1 ended up being more compassionate and hopeful than honest and realistic with Amy's parents, and more honest and realistic than compassionate and hopeful with Betty's parents. In both cases she was not sure whether her approach was the one most helpful to the parents, and in both she decided on corrective measures in the Reflective Discussion after the Parent Conference:

- In Amy's case, she planned to include in the written report to the paediatrician the specification of *severe* learning difficulties. Moreover, in the

full report that also went to the parents, it was specified that Amy had "learning difficulties to a degree which will not allow for 'catching up'."

- In Betty's case, she planned to contact local services immediately to provide counselling support to the parents as well as learning support for the child.

9.3.4. Strategies in the say-it-supportively schema for delivering the bad news

The professionals at Site M activated a number of strategies to achieve a supportive communication of the bad news (see Figure 9.3, above). They:

- *empathised* with the parents' search for hopeful prognoses for their child and for their search for a cure;
- first presented the *positive achievements* of the child;
- *reassured the parents* they were already using supportive strategies for the child's development;
- attempted to *align* the parents to the professionals' evaluation by making use of the *Perspective-Display-Series* strategy (Maynard, 1991): the parents were first asked for their own evaluation of the child, and the diagnostic formulation was then delivered as a confirmation of the parents' own displayed perspective;
- ensured that *one story* was given by all members of the team to reduce parent confusion;
- *softened their formulation* with a number of hedges, such as the difficulty of determining exactly the child's disability and its prognosis, and stating the latter in *conditional* terms;
- discounted the lack of a medical cure by focusing on the *hopeful expectation* that the child will make progress and on strategies that could ensure it;
- *colluded* with the parents in persisting in the prolonged investigation of possible medical explanations and treatments, even though their

professional opinion was that there was no medical cure.

It is important to recognise these negotiation processes because they took up a substantial amount of professionals' assessment effort, had a major impact on the clients (parents), and also had important consequences on the actual formulation of the child's difficulties and support strategies. A turn-by-turn analysis of the actual interaction in each case reveals the sensitive way in which the above negotiation strategies were applied as the professionals tried to balance honesty with compassion, and realism with hopefulness. It also shows the consequences of this negotiation stance for the problem formulation.

Relevant episodes on describing the child's level of functioning, and on the formulation of the diagnosis and prognosis, are taken from the initial Parent Interview and concluding Parent Conference protocols at Site M.

9.3.5. Eliciting information on child's departure from normal functioning

With regards to the elicitation of information on the child's level of functioning, the parents were evidently concerned with stating a **positive perspective** of progress while still stating the facts. This was also supported by the professionals.

Take, for instance, the following extract on Amy's language development. The child at 3 years was not yet saying any words. Note first of all how the parents were finding it difficult to state that the child could not talk: they diverted the subject to the child's progress not being steady, and it took four more turns and an explicit restatement of the question by P for the father to state she did not say single words; and even then, he and M immediately repaired it with a "but she's done sounds," and finally re-repaired to make the definite statement that she had never said any words. Thus her lack of words was softened by the fact that she was making distinguishable sounds. This parental drama was achieved with the support of P who hedged her questions with three "sort of"s,

twice just acknowledging the parents' deviations, and only then reformulating the question. Moreover, in reformulating it, P actually went down the development ladder from asking about "word sounds" to "*babbling* where she makes sort of papa and mama":

> P: Then, did she start to make, sort of, little sounds when she was a baby, or ?? ?? ? Sort of cooing, gurgling?
>
> F: Yes, she did; she did, yeah.
>
> M: Yeah
>
> P: And then, how did that progress then on to word sounds?
>
> M: Because, everything is on and off.
>
> P: Yes.
>
> M: Sometimes she does, she does things and then after a week, you know, she'd stop.
>
> P: Yeah.
>
> M: And then, then that it's vanished.
>
> P: Did she go through a phase of, of babbling, where she makes sort of Papa, Mama, ?? ?
>
> F: She's never done that, but she
>
> M: She's done sounds, yeah.
>
> F: Yeah. She makes lots of noises
>
> M: But it's never sort of
>
> F: Words. Yeah.
>
> M: Words of mama, dada, that sort of word, no. (M1Prot.b)

In a later attempt to determine how much the girl was understanding, P emphasised *the parents' perception* rather than the girl's achievement: "How much do you *feel* she understands?" A similar process occurred with Betty's parents.

9.3.6. Negotiating a description and explanation of the findings: child's level of functioning and its diagnosis

A similar professional caution was used in the communication of the conclusions about the child's difficulties at the final Parent Conference, but with a greater difference between cases in the levels of search for parent alignment and subsequent achievement of parental collaboration. This negotiation of the perception of the child's difficulties is understood within the two frameworks of relating with and providing support to the parents as well as making a scientifically sound assessment of the child's problem.

9.3.6.1. Successful negotiation in Amy's case

In Amy's case, effective collaboration was achieved. After the paediatrician had dealt with the parents' questions about medical explanations and interventions, the diagnosis of learning difficulties was communicated as a more hopeful avenue by the speech therapist. She made use of what has been termed the *Perspective-Display-Series* strategy (Maynard 1991), whereby the parents are first asked for their view of the problem, and then delivering the diagnostic formulation as a confirmation of the parents' displayed perspective. C1 called it "the sort of feedback about what-level-do-you-think-she-is-at" (M1int.C1).

S1 obtained parental alignment first by lengthily setting a positive frame about the child's and the parents' behaviour: there was no medical solution but appropriate education would have an important impact on the child's development; the parents had already adapted to the child's management and teaching needs. Then she introduced the first evaluative descriptions of the child indirectly in order to justify the appropriateness of the management and teaching strategies (cf. Heath, 1992, on Doctors stating diagnosis only as a way of justifying the treatment). She then went on to list the positive achievements of the child such as eye-contact.

S1 then activated the Perspective-Display-Series strategy (Maynard, 1991) for

negotiating the child's functioning levels. Note also how, in the following extract, her statement of levels was hedged by further positive accounts of the child's symbolic play and hopeful prognosis. And she also attributed the authorship (Goffman, 1981) of the evaluation to the parents: "So I think you're right ...":

> S: ...In your idea, have you got in your mind how she's equivalent to another child? Have you got an idea of what kind of level she's
>
> F: My brother has got a, a girl, she's just turned two, some of the things she's doing, she's very clever, I think she's probably half her age, one and a half.
>
> S: Yes, yes.
>
> M: In some ways, like in speech.
>
> F: Speech is one.
>
> S: Yes, I think you're right.
>
> M: Using her hands properly, you know and she's doing everything like we do.
>
> F: Yeah, she's exceptional.
>
> M: Not exceptional, she's normal.
>
> F: Yeah well ?? ?? ??
>
> S: But her level of understanding, and it's lovely that she's beginning to use some symbolic use of brushing, and that can be developed through doll play, use of objects. So I think you're right, she's at about what other children would do at a year, you know, a year plus. And I think the important thing is to say to you is that she will go on developing.
>
> F: Sure. (M1Prot.e)

Consequences of the attempt to win Amy's parents' alignment

This strategy had important consequences on the negotiated perception of the child's difficulties in a more hopeful light. Thus, at the professionals-only evaluation it had been determined that Amy was functioning at the one-year level, but after the parents mentioned the 1½ -year level, S1 conceded she was

functioning at "a year, a year plus." Moreover, as C1 herself noted, partly as a consequence of this strategy, they failed to tell the parents the child had *severe* learning difficulties.

When later the parents pressed for a more specific formulation of the prognosis, C1 was again very cautious in stating the child would continue to require support while still being able to have a level of independence. C1 engaged in a lengthy balancing act of optimistic-realistic predictions as the parents kept bringing up more specific questions (see Table 9.3.6.1, below). This ended up being a major event of the assessment for both the professionals (M1Prot.f) as well as the parents (M1int.F). F deemed C1's struggle with the questions as "intelligent" (he actually first called it 'clever' but repaired the possible manipulation connotations of the term) in that she answered his search for hopeful specific reassurance that the child would develop into a semi-independent adult while still requiring special support:

> F: I think she was intelligent, intelligent is the word, to tell us the basic things through her experience, what will happen, what might happen through her experience. At the same time she is not committing herself to anything, you see what I am saying. It's a very intelligent way of answering. ..... She didn't raise our hopes, but she didn't put them down. (M1int.F)

Table 9.3.6.1:
Psychologist's struggle with giving a helpful prognosis shown in the sequence of statements of potential vs statements of limitations in Amy's case

F: Can I just come to the point where you were saying that she will carry on progressing. Would children such as A, do they stop at a certain age, or would she keep on progressing or would they always be behind other children, do they catch up? M: Would she be able to do, you know, the normal staff that we all do?	
POTENTIAL	*LIMITATIONS*
• It's not so much that there is a sort of ceiling a point at which she would stop [progressing]	
	• as that a number of aspects of learning will probably always be very complicated for her.
• She will always be someone perhaps who whose function is fine as long as things are abstr, concrete. • She'll get on with people, • she'll talk with people, • she'll be able to do practical things,	
	• but she won't be able to discuss politics with you very much - • or you know, she will be, she'll be someone who stays very much rigid in the real world, and
• that her skills after a certain point, her skills will in a way expand sideways	
	• rather than you being able to see her learning more and more abstract intellectual things,
• but she will just learn through her experience about how to deal with this kind of person, that kind of person.	

9.3.6.2. Failure in negotiation in Betty's case

In Betty's case, the professionals' interaction was not as sophisticated as in that of Amy. In the first place the professionals' conclusions were more difficult - a diagnosis of autism and severe learning difficulties; and the parents were less prepared - autism had not been mentioned to them at all. The diagnosis was communicated with a lot of build-up preparation, including stating positive

aspects, hedging diagnostic statements, and trying to get the parents' alignment. But the alignment process was less sophisticated and not carried through to the end: the diagnosis was not negotiated. Betty's parents in fact rejected the professionals' conclusions.

A negative start

The conclusions were communicated by C1. She started off immediately with an attempt to align the parents by asking for their opinion on how far the child's behaviour at the assessment was similar to that at home. However, the mother immediately diverted the attempt by suggesting an explanation of the low level of the child's interactive skills in terms of the child's *will* rather than skills. And P then continued the deviation by talking about the hearing issue - a deviation that C1 in the post-assessment interview saw as inappropriate.

P herself did not build on the mother's perception of the child's ignoring behaviour. Instead she talked about the child's hearing as a separate issue, recommending the need for its further review. Then, without any attempt at achieving parent alignment, P moved on to state that while she might have a slight hearing impairment, the child had more serious "compound" difficulties. And she passed the authorship (i.e. source - see Goffman, 1981) of the statement of the diagnosis to C1, who appeared to be unprepared to take it on:

> P: ... I think if there's any hearing problem it's sort of mild to moderate thing. I don't think that's sort of the major area; her problems are ?? clearly compound. Her other difficulties that's important and need attention and treatment as well ?? ?? ?? If you want to (to C).
>
> C: What ?? ??
>
> P: Yes.
>
> C: Yes. What we were looking at ... (M2Prot.e)

A cautious positive build up of the evaluative picture

Despite this, C1 restarted her negotiation of the description and explanation of the child's difficulties very cautiously. There was a heavy atmosphere as she talked in a very low tone and with slow articulation. She started off with some **hedges:** the child was not keen to try things, they did not get a complete picture. She then tried **aligning** the parents: they had given "a very good" description of her behaviour (she had argued otherwise with her colleagues). Then she stated the child's **positive** achievements: understanding of cause and effect relationships was "easy for her"; and "it wasn't quite difficult to get eye-contact" (she had argued otherwise with colleagues). She then moved to **stating the problem** - they had some difficulty "catching her eye" - but immediately sought the parents alignment, allowing for the parents' view that Betty was changing in this area:

> C: And the rest of the time it was very hard for us to catch her eye. And, and yes I wanted to check, what is your impression; is that different for us as strangers? With, with yourselves you mentioned that her eye contact had changed.
>
> F: Her eye contact had come on quite a lot recently.
>
> M: Very good! I think she chooses not to look. Em, when anybody comes to visit she closes her eyes, and if you, if she's going up the stairs, I say "Come down(?), B," she carries on but with her eyes closed like this, so that she thinks if she closes her eyes you'll go away.
>
> F: Certainly with strangers it's not nearly ?? ??
>
> M: No.
>
> C: Well that's something that ?? changing.
>
> F: Yeah. (M2Prot.e)

C1 then moved on to make an elaborate statement of the child's profile as being one of "unusually" low social interaction skills. Again she used a number of **hedges** (see italics) and **positive-negative shifts:**

> C1: She's not *the kind of child that seems* to particularly enjoy

social interaction. She doesn't particularly want to ?? action games or, em, but she likes, she enjoys the things that are on her terms. So like she enjoyed flying through the air, and as part of that did make a request; did actually request that I will do it, by putting my hands on the ??; but it was, it still *felt to me* that it was on her terms rather than an immature game between her and me. Em. So that *seems to a certain, a bit* unusual; it's *not quite the sort of* usual pattern of how, of how children at that age or stage would be reacting. (M2Prot.e)

C1 also again tried to **align** the parents by referring to their having described to the team "very clearly what she seems to understand or not understand." Before stating the diagnosis, C1 built up the negative picture **positively**: the child was "behind her age cohort" (no indication of levels), but "she had got further" in non-verbal than verbal performance. Before stating the level of functioning, C1 further hedged it as not making sense to speak of ages and stages.

More problematic use of the Perspective-Display-Series strategy for negotiating levels of functioning

In contrast to S1's strategy in Amy's case, C1 here stated Betty's level of functioning before seeking the parents' opinion, but she repaired this failure immediately after. M fought off the implication of Betty being significantly behind - at a year level when she was 2½ years, focusing instead on the progress Betty had made since she was one year old. C1 did not dispute M's roundabout logic; she adopted it and allowed M an opportunity to repair the disagreement by asking about the child's level of understanding previously established as that of understanding of gestures. C1 thus achieved the parents' alignment to the child's level of understanding being at around one year:

M: ... I think she, from what I can remember she was doing at a year, saying in a year, I think she's more advanced than one year, for Betty.

C: Yeah. And in terms of her understanding?

M: Em. No, not in terms of verbal understanding.

C: That hasn't moved much? No. So it's still. For, the

kind of things you would expect at that stage are understanding one or two phrases that people say to you, especially if you've got some clues from the context, or suggestions to show you what's meant. And that, that seems to be the kind of stage we saw her at, and that you've described. ... (M2Prot.e)

Failure to use the Perspective-Display Series strategy in communicating diagnosis

C1 then moved to the next step, stating the diagnosis, more rapidly and more strongly. P afterwards regarded C1's failure to first seek parent perception of diagnostic terms as a slip in the usual approach. C1 started with a strong restatement of the child's profile in more categorical terms: "low mental age" and "a weakness in communication and social communication". She **hedged** the use of the label with a longish statement of the "very very hard" difficulty of knowing whether the child's pattern of functioning would remain the same, again bringing in a consideration of the parents' perception of Betty as currently changing. And she stated it in **conditional** terms: if the pattern remained "it would become appropriate" to describe her as within the autistic spectrum. And she allowed for the pattern to actually change in the next year.

However, the mother was shocked by the use of the label of autism, a reaction noted by all three professionals But she was able to express her feeling of shock and go on to oppose the application of the label to her child: she didn't think the child was in a world of her own which was what autism meant to her; she rejected the implication that her child would always remain in that condition; and she instead attributed the child's lack of progress to her own failure to support Betty appropriately, ending with a request to the team for advice and support to help the child overcome her difficulties.

Responding to mother's resistance with a restatement of the bad news

At this point, while showing a concern to reassure the mother, C1 also very deliberately ensured that her diagnosis was taken in by actually repeating it

twice. Thus she first took up the mother's focus on "ways of helping the child" and immediately mentioned the only incident where the parents interacted with the child in this assessment in order to affirm that the parents' approach was "very appropriate and very nice" and "supportive" for the child. But this was stated as an aside. She went on to explain that the term autism was a "rag-bag" term that was being used "tentatively". She then strikingly ignored S1's attempt to focus on ways of supporting the child, and went on to re-state the diagnosis of delay and an uneven pattern that would place Betty in the autistic spectrum.

This in fact allowed the mother to restate her disagreement with the diagnosis: Would the child "ever catch up?" But again, C1, while allowing for the possibility of adaptations for schooling, was more definite in her prognosis than she had been in Amy's case:

> C1: Em, so I wouldn't want to rule out any particular option. I think that in our experience we wouldn't expect her to catch up, as it were, because she's, she's now 21/2, and she's quite a long way behind in a lot of the skills, and it, it would be extremely unusual for her to suddenly get to grips with it all ... (M2Prot.e)

In this case, C1 sounded more realistic and less hopeful. She appeared to have deliberately followed the strategy of ensuring that the parents understood the term used and also had an opportunity to talk about it (M2int.C1).

Team-opinion schema: Bad news restated by colleague

While providing this opportunity to the parents, the professionals here also effectively used the *team-opinion* schema: one story, even if bad, would be told by all the professionals. C1 reflected on this need in the post-assessment interview. As seen above, she had disallowed S1 to possibly change the story. M found herself faced with the same 'story' when P shattered one of the props for the hope of the child catching up: Betty had not been "normal" before the immunisation, as M had stated; her difficulties were already apparent before the

immunisation incident and could not therefore be removed. The difficulty of this negotiation is shown in the following extract, where P softened her judgement by the use of five qualifiers of the language of uncertainty (see italics) in one breath:

> P: ... So *I think* the *sort of feeling* one gets is that *perhaps* she *wasn't quite*, you know, developing *quite*, em, *as average*, before the [immunisation]. (M2Prot.e)

M butted in before P finished her conclusion to restate how normal the child was before the immunisation and how she suddenly changed. She then made an appeal for a medical explanation - thus implying the possibility of a cure. P evaded the pre-immunisation issue, and talked about causes of autism generically, indirectly again repeating C1's diagnosis: "delay in development or learning difficulties, and, and with children who show autistic-like, em, difficulties or autistic features."

M had now overcome her initial shock, but also protested more weakly, putting the issue in terms of the child *becoming* rather than being autistic but still using the term herself. P repeated C1's diagnostic formulation, but kept to the mother's perspective of talking about it as a future possibility rather than current diagnosis. Moreover, P focused on the parents' perception of "obvious" **progress** in the past six months and went on to state that the child would go on progressing. She in fact stated the prognosis - "recognising she's quite likely to need continuous help through childhood" - only as subservient to the goal of helping the child to move forward. P then restated the difficulty of finding the cause, and here M again protested about this conclusion by requesting medical tests which Betty had not yet had. At this point, S1 and P colluded with the parents in engaging in the planning of further medical investigations.

9.4. Conclusion

9.4.1. Impact of the inter-professional and parent-professional group dynamic context

This chapter has shown further how the professionals' decision making was framed within negotiation structures of inter-professional and professional parent interaction.

Firstly, within a transdisciplinary context, evidence was given of how the power-game schema may lead to the domination of one particular perspective over others. A professional may be more inclined to use his or her specialist disciplinary approach and leave the other perspectives to others. When this was combined with different expertise status and authority, it was shown how the process may be dominated by one particular perspective, leading to different feelings of satisfaction and support by the two types of clients: professionals working with the child and the parents.

Secondly, evidence was given of the activation of two categories of negotiation structures in professionals' communication of the bad news about the child's disability: the *defocusing* vs. the *supportive-delivery* schemas:

- *Defocusing*: The larger number of professionals at Site E (and thus non-personal negotiation dynamics with the parents) was conducive to the professionals' activation of bad-news-suppression schemas, such as focusing on the *improvement* and *not mentioning* the disability. At Site M, parents' resistance to the bad news led to *collusion* with the parents in pursuing what were seen as futile medical investigations.

- *Supportive delivery*: At Site M, the attempt to give the bad news supportively to the parents required the professionals to engage in protracted negotiations within the two continua of *realism* vs. *optimism,* shifting between honesty-compassion and realism-hopefulness. These negotiations led to different ways of perceiving the child's difficulties, and in the end were

resolved through collusive stances by the professionals with the parent search for medical remedies.

Moreover, the negotiations were seen as successful in Amy's case where the parents generally accepted the diagnosis, and unsuccessful in Betty's case where the parents rejected the diagnosis. There was also evidence of a paradoxical approach: Amy's more prepared and realistic parents were given a more hopeful account of their child's diagnosis and prospects, while Betty's more resistant parents were given a more realistic and less hopeful account.

The chapter has also served as a conclusion to the whole results section of the study.

9.4.2. Overview of the results: A proposed model of Naturalistic Decision-making frameworks in assessment of disability

Figure 9.4.2, below, presents a general model of the findings of the study. Two major categories of frameworks were reported:

- The left part of the model shows the ***sequential* procedures** through which the problem was addressed and decisions were reached. The professionals followed a sequential process from *Constructing Hypotheses* to *Recommending* remedial action and *Planning* its implementation (top to bottom). It also shows that there were some back and forth sequences within this Cycle (the upward arrowed lines on the sides of the sequence), and that the Cycle was repeated during the assessment event (the left circular line).

- The right part of the model shows the ***knowledge and interpretive frameworks*** that were found to have influenced the professionals' execution of the above processes:

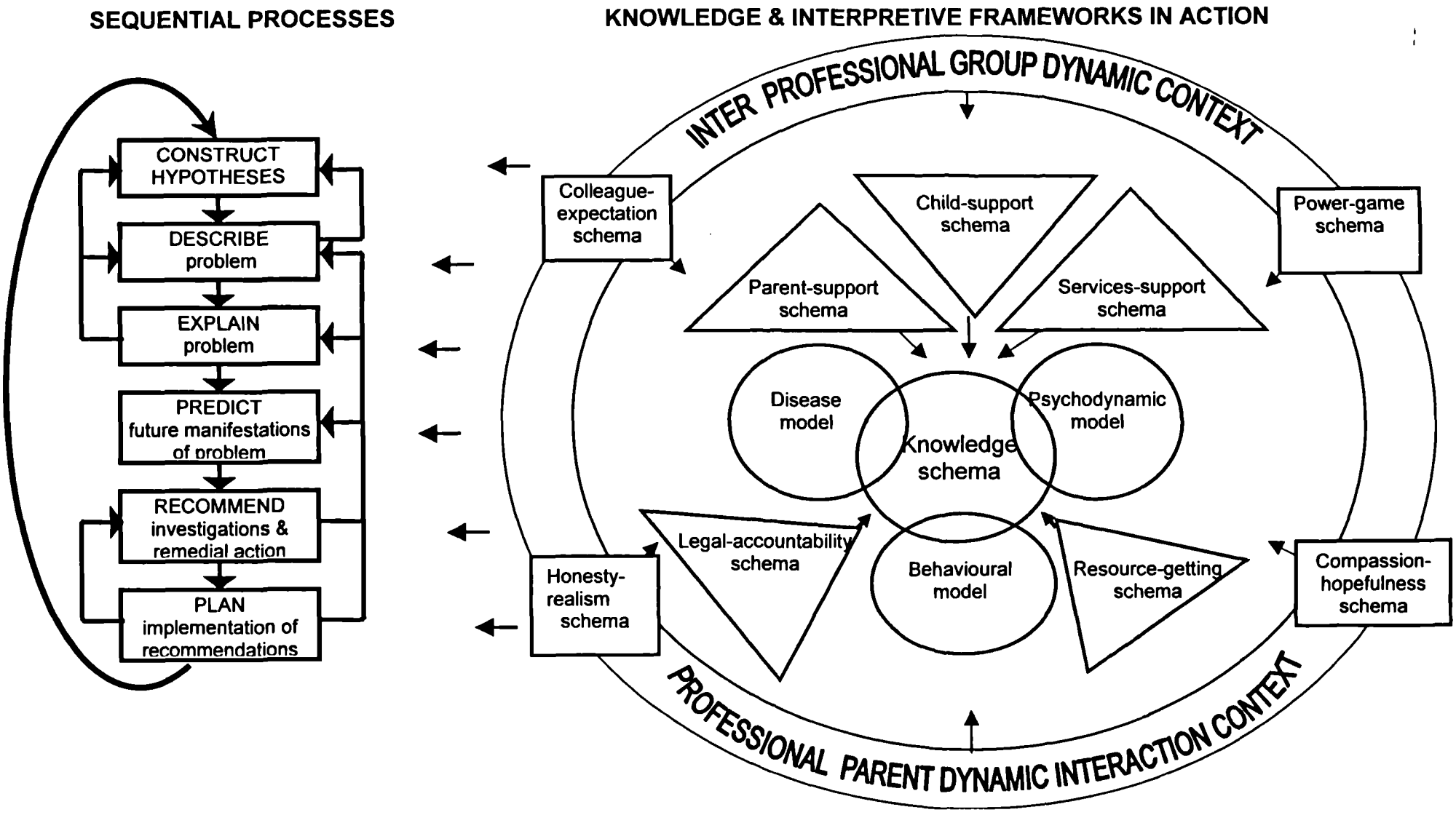
Knowledge structures: At the centre are the three models of the *knowledge schema* which were espoused by the professionals: the disease, psychodynamic and behavioural models.

Goal structures: These knowledge structures were activated within the three surrounding categories of *goal* schemas: (1) the three *client-schemas* at the top, namely the *parent-*, *child-*, and *services-support schemas*; (2) the *legal-accountability* schema on the left, and (3) the *resource-getting* schema on the right.

Negotiation structures: The outer rings around the above structures represent the framing of the application of all the above schemas by the negotiation frameworks, made up of two major elements: the inter-professional group interaction process, and the professional-parent interaction process. Two related schemas were activated in each frame: the *colleague-expectation* vs. the *power-game* schemas, and the *realism* vs *optimism* schemas.

The next chapter will consider the importance of these findings to the literature on assessment of children with disability and their families, as well as within NDM theory in general.

Figure 9.4.2:
Naturalistic Decision-Making frameworks in multiprofessional assessment of disability



Key: ○= KNOWLEDGE structures; Δ = GOAL structures; □ = NEGOTIATION structures

Chapter 10

DISCUSSION

10.1. Introduction

This chapter relates the findings to the relevant literature. The following issues are discussed:

- The results are about the holistic NDM process and are exploratory. Assessment of disability has all the features of ill-structured problems and of NDM situations. The focus of this study on frameworks-in-action corresponds to NDM research on "situation awareness".
- The findings identified important features of NDM in assessment of disability such as the influence of context, the importance of the *explanation* process, the influence of *knowledge*, *goal* and *negotiation* structures. Each of these needs to be included in experimental studies of the phenomenon.
- The study highlighted and illustrated the operation of inter-professional and professional-parent *negotiation* structures in the formulation of the problem and its solutions.
- The comparison of multidisciplinary perspectives on the same presenting problems can be a complementary approach to novice-expert contrasts more usually used in decision-making research. The impact of the application of the three knowledge structures - the *disease*, *behavioural* and *psychodynamic* models - was illustrated but requires deeper investigation. A modified psychodynamic model may make a complementary contribution to the prevailing bio-behavioural approaches to autism. All three *knowledge* structures were found to be tied quite strongly to the *medical* model. It is

suggested that this may have been influenced by the particular setting and cases of the study.

- The coding system developed through verbal protocol analysis is presented as a useful tool for constructing the goals of group assessment protocols.
- Finally, an account is given of the limitations of this case study with regards to the need for replication and of experimental study of its exploratory findings, its restricted sample of tasks and decision makers, and the restriction of its focus.

10.2. Exploratory aims

The purpose of this study was to identify and describe decision-making frameworks actually used by professionals in assessments of children with disability in naturalistic settings. Its challenge has been the attempt to develop a holistic understanding of a very complex phenomenon, namely the interplay of shifting use of different decision-making frameworks in real, complex assessment tasks, within complex environments, by a complex group of decision makers:

- the *task* of assessing children with autistic spectrum difficulties included complex within-child impairments, and also complex parent-child relations and connections to local services;
- the decision-making *environment* was complicated by different institutional contexts, multi-agency at one Site, with different professional training and experiences of group members and different connections to primary and secondary services;
- the *decision makers* were operating both as individual professionals, as well as part of a group with dynamic relationships to clients: inter-professional

and professional-client group dynamic negotiation contexts influenced both individual and group decision making.

- moreover, two distinct approaches to data collection and analysis had to be used: verbal protocol analysis and discourse and conversation analysis.

These complex combinations of conditions and approaches did create a challenge to the definiteness of the findings. Thus none of the four decision-making frameworks could be exhaustively investigated. Instead, the focus was on the inter-relatedness of the activation of the four structures within the applied decision-making process. The detailed frame by frame analysis of one particular discussion in #8.4 above illustrates the usefulness of the approach (cf. Tannen & Wallat, 1987; Beach *et al.*, 1997).

10.3. Assessment of disability is a NDM phenomenon

The first contribution of this study, therefore, was to add the domain of the assessment of disability to other areas already established as constituting NDM situations. No reference to assessment of disability had been included at the two international conferences on NDM which encompassed such diverse fields as commercial and military aviation, corporate planning, jury deliberations and anaesthesiology (Klein, 1997). This study has served to show how assessment of disability has the task, environment and decision-maker features characteristic of NDM situations.

10.3.1. Assessment of disability as an ill-structured problem

First of all, assessment of disability is an ill-structured problem. One important feature of ill-structuredness is the lack of any agreed-upon correct, standard

solution to the problem (cf. Reitman, 1967; Barrows & Feltovich, 1987; Voss, 1988). The presenting child problems in the four cases of this study appeared relatively similar: different levels of developmental delay, impairments in language, communication and social interaction, and stereotypic or repetitive behaviour. Yet, different judgements and decisions were reached by the two Sites and by individual professionals in each case. Even with hindsight, the post-assessment interviews revealed no definite feelings of agreed-upon best formulations of the nature of the problem and its solutions.

- At Site M the main decisions in each case concerned further investigations. The parents harboured hopes for a medical solution about which the professionals were in two minds. In both cases the professionals were not sure whether their communication of the diagnosis and prognosis to the parents was too optimistic in Amy's case and too realistic in Betty's case.

- At Site E, the dominant hopeful psychodynamic formulation of the diagnosis and prognosis regarding Cathy was seen by some as useful for the child, while others saw it as loading the parents with guilt and irrelevant to the educators' day-to-day support for the child. In David's case, there was more general agreement about the diagnosis, but differences regarding appropriate arrangements for the child's schooling.

10.3.2. Assessment of disability as a NDM situation

The assessments also showed the other characteristics of naturalistic decision-making situations:

- *Uncertain dynamic environments*: At both sites the behaviour of the child and parents could not be predicted. Amy and Cathy exhibited their best behaviour, while Betty was at her worst; David exhibited a mixture of behaviours with the parents and educators that required rechecking of

perceptions. Amy's parents' persistent demand for a specific prognosis and for alternative treatment were unexpected; in Betty's case, the professionals were unsure throughout whether the parents were seeking to use the assessment for legal action, and whether they would insist on seeing the consultant neurologist; the strong rejection by the mother of Betty's diagnosis was seen as surprising. In Cathy's and David's cases there was most uncertainty about A's reaction to the request for a place at her school: A, in fact, decided to admit Cathy, about whom there was doubt if she had autism, but rejected David, who was diagnosed with autism.

- *Multiple action/feedback loops.* The feedback the professionals obtained from their interview with the parents or educators in each case led to the setting up of particular goals and relevant assessment activities; the feedback from the child's interaction led to particular conclusions or questions to raise with the parents; the parents' initial reaction to these conclusions in turn led to other goals and actions with the parents and to further follow-up actions after the assessment.

- *Shifting, ill-defined or competing goals.* When Amy's parents were told there was no medical cure, they shifted the discussion to a consideration of alternative treatments - hyperbaric oxygen treatment. While EPs had seen Cathy's case as one of getting appropriate school placement, the issue of the child's early childhood separation dominated the assessment instead. When David's problem was seen as being that of autism, the goal changed to how to get the resources. Moreover, while the nursery teacher was concerned about the disruption David was causing at the school, and the parents about the limited schooling he was getting, A was concerned about the lack of a place for him at her school and difficulties in arranging an alternative placement.

- *Organisational goals and norms.* The status of Site M as a tertiary specialised medical institution led to expectations of pronouncements on diagnosis, on adherence to the norms of medical science, and on discretion

in the use of scarce resources (e.g. MRI scan). Site E decisions were undertaken within the Stage 3 Education Code of Practice procedures, and within the LEA formal norms for resource allocation and the informal norms of the receiving school.

- *A large quantity of information.* The judgements and decisions in the assessment required the collection of information on several aspects of the child and family functioning, each within large knowledge-rich structures, so that in fact each case was decomposed into a number of related but distinct subproblems.

- *Multiple players.* In this study, the multiplicity of players included multiprofessional decision-making groups, as well as the participation of two parents in each case as part of both the decision-making task as well as decision makers.

- *Time constraints.* Though not an emergency situation, the assessments were conducted within time constraints that affected procedures and decisions. For instance, due to lengthy consideration of the diagnostic formulation in Betty's case, there was a significant failure in the planning of the Parent Conference; and in David's case, no formal final decision was reached.

- *Decisions with meaningful consequences.* The evidence of the commitment of the professionals and parents to obtaining the best outcomes in the assessments was obvious in their explicit emotional involvement. Each assessment had important practical consequences for the child and parents in terms of judgements (Site M) and placement decisions (Site E), and raised serious service and professional-parent interaction concerns for the professionals.

These findings suggest that assessment of disability cannot be appropriately understood through traditional normative approaches to decision making (see

e.g. Ysseldyke, Algozzine & Mitchell, 1982; de Bruyn, 1990).

10.3.3. The framework dimension in NDM

In addition to the above, this study's description of a four-framework influence model has served to illustrate possible ways in which activation of decision-making structures occurs in the particular domain of assessment of disability. This dimension is central to NDM research and has raised substantial discussion under such terms as "schemata", "mental models" and "situation awareness", and "scripts" or "action repertoires" (see e.g. Endsley, 1997; Lipshitz & Shaul, 1997). Despite differences in terminology within NDM research, the distinctions between the different frameworks made in this study are regarded as important for this area of research (Lipshitz & Shaul, 1997).

Thus, there is general understanding that perception is influenced by relatively permanent stored configurations of knowledge and experience (Marshall, 1995; see #2.2, above). However, NDM research has also pointed out the importance of the less permanent frameworks constructed to represent the current problem situation – what in this study has been termed schemas-in-action, that is "labile entities that are constructed and discarded as decision makers move, in time and space, from one situation to another" (Lipshitz & Shaul, 1997, p.298; cf. Endsley, 1997). This study has illustrated how these schemas-in-action could be captured by the three task-process codes of *description*, *explanation* and *prediction* that have been regarded as constituting situation awareness in decision making:

> (a) knowledge of the relevant elements in the system that can be used in directing attention and classifying information in the perception process;
> (b) a means of integrating elements to form an understanding of their meaning ...; and
> (c) a mechanism for projecting future states of the system based on the current state and an understanding of its dynamics. (Endsley, p.274)

This study has added the important process of *hypothesis construction* to the above three components of situation awareness. This process was more easily evidenced through the interview data. Its influence in each of the four assessments contrasts with Bus & Kruizenga's (1989) conclusion that information gathering in assessment of learning difficulties might occur without hypotheses. On the other hand it fits with NDM reports that hypothesis generation and testing are essential features of decision making in ill-structured problems (Klein, 1997; Cannon-Bowers & Bell, 1997).

While illustrating the operation of the above four *processes* in the development of situation awareness, this study has also identified and illustrated knowledge and interpretive structures that influence the *content* of situation awareness. Relevant empirical studies have focused either on measuring what is perceived at any point in time of the development of situation awareness (Endsley, 1995), or on determining the constitutive elements of situation awareness among particular groups such as educational psychologists versus parents (Boreham *et al.*, 1995). This study has instead attempted to show how the content of situation awareness in assessment of disability may be greatly influenced by the interactivation of particular *knowledge* structures (three *knowledge* schemas), *goal* structures (which client and which purpose is being served), and *negotiation* structures (two inter-professional plus two professional-client schemas).

10.3.4. The multidisciplinary dimension versus expert-novice dimension

This study has also addressed in a new way the other important dimension in NDM research, namely the impact and characteristics of expertise on decision making. Most studies have made use of expert-novice comparisons in the search for features in experts' decision-making that are lacking or different in novices, with the aim of revealing the impact of training within any particular field (see e.g. Ericcson & Simon, 1993; Voss & Post, 1988; Zsambok, 1997). This study has instead focused on the impact of *different training* on experts'

decision making when presented with the same problem. The study of how experts from different disciplines understand and solve a task provides an additional window for our understanding of the features of the *domain specificity* of expertise reported in expert-novice studies (see e.g. Ericcson & Simon, 1993; Zsambok, 1997): not only is expertise specific to particular problems (e.g. chess vs. physics), but it is also specific to particular disciplinary perspectives on the same problem. These results are discussed below. Moreover, the analysis of the transdisciplinary assessments in this study also addressed the challenges of the long-standing concern for the development of a holistic approach to the assessment of persons with disability (see e.g. Davie, 1993). Such a concern needs to address the paradox of enhanced differentiated disciplinary perspectives in multidisciplinary settings exhibited by Y at Site E, as well as the impact of conflicting and shifting schemas as shown especially in the diagnosis of Betty's and Cathy's difficulties.

10.4. Implications of findings on naturalistic decision making in assessment of disability

10.4.1. Identification of NDM frameworks that require replication in laboratory research

The above characterisation of assessment of disability as typical of NDM highlights the relevance of the NDM research approach adopted in this study. Classical decision-making research was conducted in the laboratory, focused on human decision-making errors and biases, and presented problems in terms of choice out of a set of static alternatives (Cannon-Bowers, Salas, & Pruitt, 1996). In contrast, the NDM approach is based on the assumption that "new insights can be gained by studying performance in the rich context of naturalistic settings" (Beach *et al.*, 1997, p.33; see #1.4, above). While controlled laboratory studies are seen as a relevant complementary method,

NDM studies in the field provide important insights on naturalistic phenomena that need to be included in laboratory simulations of NDM (Woods, 1993; Cannon-Bowers, Salas, & Pruitt, 1996).

Thus this study has served to point out the phenomenon of the concurrent use of a multiplicity of frameworks in decision making (see especially #8.4), though it has failed to produce any exhaustive specification of any one particular framework. The importance of this finding is to be seen in its contrast with the conclusions reached in studies on assessment of disability based on vignettes presented in the laboratory or in survey form.

Classical decision studies have often reported inter- and intra-professionals' inconsistency of judgement, suggesting that professionals' decisions amounted to little more than guesswork with little difference between experts and novices (Mcdermott, 1980; cf. Ysseldyke *et al.*, 1981; Bus & Kruizenga, 1989; de Mesquita, 1992). Even more glaring inconsistencies were reported in a recent study of magistrates' bail decisions: over half of the participants made different bail decisions when presented with the same vignette twice within a series of cases (Dhami, 1999).

However, the present study has served to show how, what seems to be the same presenting problem, may in fact be regarded as a different problem when framed within different knowledge, goal and negotiation structures. When decision making is studied through vignettes, therefore, the activation of these varying structures needs to be included in the simulation exercise. For instance, one form of the vignette could specify that the resulting decisions are to form part of legal action being contemplated by the parents against the Health Service or the LEA. Indeed, the influence of each of the four types of frameworks found operative in this study can be tested through laboratory research where the variables in any one framework can be manipulated and the results can be more directly related to such manipulation.

10.4.2. The significance of decision-making context

In contrast to laboratory approaches, the study of naturalistic settings has highlighted the importance of the decision-making *context,* including subtle features of the situation such as "who has the information that can be shared, with whom collaboration is possible, and about group goals, values, and standards" (Beach *et al.*, 1997, p.33). This study has shown, for instance, how the tertiary medical setting of Site M led both the parents and professionals to focus on medical understanding and action, while the educational setting of Site E led to a focus on psychodynamic intervention and education-placement considerations. Moreover, the structure of the assessment procedure, the type of professional group and characteristics of the parents led to important differences in the dynamics of each case. The discipline and training of professionals, and their administrative commitments also led to different foci on the problem.

10.4.3. Situation awareness in assessment of disability

The study has served also to illustrate the application of a central concept in NDM to assessment of early childhood disability, namely *situation awareness* (Endsley, 1997). The following features were found to characterise situation awareness in assessment of disability (see Figure 9.4.2 above):

- *With regards to the situation awareness* **process**:
    - ◊ The naturalistic discussions of each assessment evidenced the application of four processes through which professionals constructed their situation awareness: *hypothesis construction, description, explanation* and *prediction.* These were complemented by two decision and action processes *(recommendation* and *plan of implementation).*

◊ *Hypothesis construction* and *explanation* were essential processes of professional assessment in both the medical and educational settings.

◊ *Prognostic* formulations were implicit in the recommendations for future special placement and provisions in each case, but were only made explicit through parental pressure. Where the parents were not yet given any diagnosis, as in David's case, and put no prognostic questions, no explicit discussion on his future developmental prospects took place.

- *With regards to the situation awareness* **content**, the following were found to be influential factors:

  ◊ institutional and individual professional constructions of the goals of the assessment, in terms of who is the client and what purposes the assessment is intended to serve;

  ◊ the historical background of the problem situation, including both parental experience of services as well as team experience of similar situations (cf. Voss & Post, 1988);

  ◊ the referral questions of parents and services;

  ◊ professional *knowledge* schemas;

  ◊ institutional and resource constraints;

  ◊ actual inter-professional and professional-parent negotiation dynamics.

10.4.4. Diagnosis as an essential decision-making process

Strong medical approach

One of the main and unexpected findings of this study was the significance of the application of the diagnostic process as a search for explaining the problem in assessment of disability *even* in the educational setting. The

prescriptive literature on assessment of disability within educational settings, as explained in Chapter 2, has been critical of a diagnostic approach based on a within-child deficit model (Gillham, 1978; Booth, 1978; Ainscow & Tweddle, 1979; Tomlinson, 1982; Bryans, 1993; Barnes & Mercer, 1997; Clough, 1998), though a child-environment-interaction model has been more tied to practice (Wedell, 1995; Daniels, 1995; Lindsay, 1995). Participants - and more explicitly EP1 - showed awareness of this criticism in their espoused theories. But it was found that in their decision-making action, the educational professionals' recommendations for special provisions were in fact strongly tied to their implicit - if not explicit - within-child diagnostic formulations.

At the same time, this study did also show an important contrast in the function of the diagnostic process in medical and educational settings: in the medical setting it was an end in itself with therapeutic value for the parents, while in the educational setting it had more significance as a means to the end of providing appropriate educational support and of allocating scarce provisions.

All this points out the need for educational psychologists to be also trained in the diagnostic process and in the recognition of its place in their decision making (cf. Boreham *et al.*, 1995).

Weak influence of social model

However, it was striking to find so little evidence of the use of the social model in the assessment of the four children, despite the current literature. This may be seen as an illustration of the impact of the operative frameworks on decision making, particularly the influence of institutional goals and norms.

Thus, **Site M** professionals espoused a strong repudiation of the *disease* model prevalent in medical practice. However, they were in a dilemma because they worked within a context where their clients - both local services and parents - expected a medical function from the Site associated with a specialist hospital service. Moreover, there was an explicit institutional norm

that the Site would answer specific client questions, and they could therefore hardly disregard the fulfilment of such expectations. Thus the primary focus of the professionals-only evaluation in both cases was the determination of a diagnosis and its delivery. And in the final Parent Conference both parents sought medical advice and intervention. The only impact of their espoused theories was thus the inclusion of the parents as their clients: these professionals complemented their diagnostic function with a concern for supporting the parents' coping with the diagnosis. Even this could become problematic, as in Betty's case, under the influence of other institutional goals.

Similarly, **Site E** professionals worked within the goals and norms of the Statementing procedure. The need to justify the allocation of scarce special provisions was based on the determination of the child's different needs, leading to a focus on a description of the within-child difficulties. This is certainly in line with the current calls for identification of within-child disorders like dyslexia and ADHD in order to win special resources for the children (see e.g. Riddell, Brown & Duffield, 1995; Keen, Olurin-Lynch & Venables, 1997; Corbett & Norwich, 1997). Further research is required to determine whether such a focus is also inherent in preschool assessment of children with difficulties suspected to lie within the autistic spectrum.

This study has also provided further support for the conclusions of other researchers that the application of the social model in terms of taking up the client's point of view was hindered by a focus on the constraints of the administrative system (see e.g. Armstrong, 1995). Thus, David's mother's concern with providing appropriate support for the child's learning within the mainstream was overshadowed by the perception of the teacher and the school that the only possible quick provision would be for special school placement. Additionally, the deputy head of the only relevant special school in the borough, was not primarily worried about the child's loss of opportunities. Rather, her concern seemed to be focused on the problem her school would face unless she ensured there were arrangements for out-of-borough placement, and on the problem faced by the teacher who could not be

expected to cater for a child with autism without any support. Thus, the concern of the parents that their child at 4 years of age was only attending two days a week, and these unprofitably because of lack of support, was not felt with the same urgency by the professionals. Indeed, they were happy that the parents had understood the child's need for special schooling, and that these would be arranged by the beginning of the next scholastic year (i.e. September) which was eight months away. In fact the teacher complained that, following the assessment, the only special provision of speech therapy support was minimal and not at all meeting her needs to support the child.

It was in fact the psychotherapist, who was not tied to the institutional norms of Site E, who evidenced a perspective that balanced a consideration of possible within-environment influences interacting with a within-child disorder. Her situation awareness was influenced by her psychodynamic orientation which attributed a social causation of the child's distorted coping mechanisms. She thus focused on the social context of the child's developmental difficulties both within the home and school. Chapter 9 has shown how she perseveringly pursued her hypothesis of possible traumatic experiences at birth and infancy. She showed a similar approach to the child's school experience. This was most evident in her evaluation of the child-teacher interaction during the assessment. David's teacher wanted to show that he had a disorder that required special provisions. She was worried when she saw him quite settled with his dad. She was pleased to see him later manifest unmanageable behaviour with her, even though this required her to physically pull him around under observation from the other professionals and parents: she felt this was necessary for the group to be persuaded that David needed special provisions. It was only Y who later (in the interview) reported being irritated at the teacher's non-sensitive physical handling of David and implied that the child was not offered a "safe" social context as that provided by his father. In another case not used in this study, Y was also the only one that saw the call for special schooling of the child as arising out of the school's concern for obtaining high scores on the schools' league table since the child's development was only slightly delayed.

The parents in this study, too, showed little influence from the social model. There was little evidence of the "shift from a caring (and ultimately patronising) model of special needs to a rights-led demand from individuals" (Corbett & Norwich, 1997, p.384). It was the Site M professionals in Betty's case who considered the possibility that the parents might be influenced by advocacy regarding the impact of immunisation procedures on children's development; and at Site E it was the psychotherapist who was aware of the possible impact of National Autistic Society opposition to psychotherapeutic approaches. None of the parents, however, had in fact received any advocacy support (cf. Gross, 1996).

However, it must be stressed that no suggestion is being made that the findings of this study on the application of the medical and social models be generalised to all current assessment practice in the UK. Rather caution is required because it is possible that the findings have been strongly influenced by the type of difficulty presented by these children, by the children's preschool age, by the parents' stage in dealing with the problem, and by the tertiary level or Code of Practice Stage (DfE, 1994) of addressing the problem.

10.4.5. Seeing the assessment event as part of a longer process

Another dimension of assessment that was highlighted in this study is the importance of seeing the assessment event as part of a longer term process of supporting the child and family. Though this has been pointed out strongly in the prescriptive literature (see e.g. Wolfendale, 1993), it was still striking that in the assessments of this study, which were essentially one-off events, the professionals were aware of the importance of their links to pre- and post-assessment services offered to the child and family. At each Site,

- serious consideration was given to the current understanding of the local services and the parents before carrying out any new activities with the child and family;

- within the assessment itself, there were three cycles of problem solving and decision making, with the search for clearer situation assessment and planning of action;
- the parents' reactions at the final conference was followed by further reflections and action to continue the search for a better understanding of the problem and to provide corrections or other support perceived as necessary following the reactions of the parents.

Two conclusions are drawn from the above. First of all there is a need for practitioners to include pre- and post-assessment links with client and services within the formal structure of the assessment. Secondly, this confirms the action/feedback process as a key feature of decision making in naturalistic settings.

10.4.6. Negotiation of problem formulation and recommendations with the parents

The professionals' delivery of the bad news about a child's disability *to* the parents has been the focus of a lot of research (see e.g. Cunningham & Davis, 1985; Ormerod & Huebner, 1988; Murphy, 1990; Cottrell & Summers, 1990). The literature also points to the particular challenge presented in this area in the case of children with autism (Shea, 1993; Wakschlag & Leventhal, 1996; Siegel, 1997). More recent studies using conversation analysis have also described how in fact the problematic situation is often resolved by turning the formulation of the child's disability into a joint construction between professionals and parents (Maynard, 1991; Gill & Maynard, 1995; Abrams & Goodman, 1998).

The present study has confirmed and elaborated these more recent findings through the identification of several embedded schemas in facing the dilemma of supporting parents in dealing with the bad news about disability. It has indicated the impact of such schemas in either *defocusing* the news by avoiding mention of the disability and highlighting instead the child's

improvement, or of the explicit delivery of the bad news but within an optimistic package and supportive interpersonal strategies. Moreover, it has shown how schemas for the defocusing or giving of the bad news operate in conjunction with other schemas in the context of transdisciplinary assessments. It has served to illustrate how "empathy and warmth" are indeed "vital ingredients of good care," and pointed out that in some situations where parents are focused on diagnosis, these interpersonal processes "are more important than the provision of information" (Hall, 1997, p.94). It has certainly served to highlight the need for professionals to be trained in this particular skill of the management of the negotiation process generally, and of the specific skill of delivering the bad news to the parents (cf. Buckman & Kason, 1992; Gill & Maynard, 1995; Abrams & Goodman, 1998).

10.4.7. Inter-professional negotiation processes

As has been explained in the introduction, this study was not on team decision making *per se*, but rather included the social negotiation frameworks in transdisciplinary assessment as one of a number of the influential schemas activated in decision making about disability. Two inter-professional negotiation schemas were identified:

- a search for co-ordination and consensus through the *colleague-expectation* schema, and
- a search for influence through the *power-game* schema.

The colleague-expectation schema - shared mental models

The colleague-expectation schema fits more into current NDM research on team decision making, which "is moving beyond seeing teams as social entities to seeing them as thinking entities" (Zsambok, 1997, p.114) with a

focus on "shared mental models" or "team mind" (Orasanu & Salas, 1993; cf. Larson & Christensen, 1993). Two elements have been distinguished within shared mental models: shared expectations of the task - about "how events are likely to unfold and how the team is likely to respond to task demands"; and of member characteristics and behaviour - "team members can predict the specific behaviour and needs of their team-mates" (Cannon-Bowers, Salas & Converse, 1993). As teams work together over time, they improve their co-ordination through increased levels of shared expectations (Orasanu & Salas, 1993; Christensen & Larson, 1993).

Though the evidence for the colleague-expectation schema was most clear when it led S1 to make a wrong prediction about C1's diagnosis of Betty, this incident itself showed that this negotiation structure was being activated in a search for consensus. Moreover, it showed how such expectations were tied to the team's history. Furthermore, it showed that even among professionals who had been carrying out similar assessments together for years, the ill-structured nature of the problem could lead to different configurations of situation awareness. This was related to the concurrent activation of different schemas, such as competing goals: in Betty's case, C1 activated the *legal-accountability* schema with its focus on professional scientific goals of the assessment, while S1 activated the *parent-support* schema and focused on the possibility of postponing the use of the autism label until a next review as the child was still 2½ years old and the parents had not yet been given any diagnosis.

Apart from this incident, the colleague-expectation schema worked well at Site M because there was evidence of shared expectations: a shared scientific schema (i.e. the disease model), a shared foregrounding of the formulation of a diagnosis as a main goal, and a shared goal of being supportive to the parents. The whole assessment procedure was also a shared "habit" (SiteMpol.C1). Thus, Site M professionals could flexibly swap roles in note taking and direct engagement with the child and family; the speech therapist could deliver the diagnosis instead of the psychologist, while the latter could

make recommendations about ways of supporting the child's development of communication instead of the speech therapist; they could pass on a task to the best person able to undertake it, such as S1's passing on of the discussion on Amy's prognosis to C1.

This effect of a shared mental model of the situation was also evident in the actions of the core group at Site E: for instance, EP1 could rely on Y to decide if psychotherapy was required and then pass on the psychodynamic interpretation to the parents in Y's absence in Cathy's case; EP1 could also rely on A to join her in disregarding the Code of Practice rules by talking about the child's possible placement at her school through mere eye contact. On the other hand, the lack of a shared mental model in the case of the other members at Site E interfered with the process: EP3's and C2's lack of knowledge about the assessment system and about A's behaviour led to a suppression of any discussion about possible placement for David.

The power-game schema

At Site E, however, the *power-game* schema was more evident. There was evidence of the application of two rival scientific models - psychodynamic and behavioural. Y dominated the discussions especially in Cathy's case: there was evidence of her use of specialist expertise in psychodynamic approaches, of using the support of the formal leader (EP1), and of her persistent assertion of her approach and discounting of rival approaches. Moreover, in contrast to the expression of disagreement and attempts at achieving group consensus at Site M, the non-core professionals at Site E avoided disagreement by suppressing serious concerns. For instance, C2 held back from intervening though she felt the team should have taken up the parents' questions regarding diagnosis because she was not sure how the team was supposed to proceed and how the other members would react, given she came from health to an educational setting.

Inter-professional and inter-agency negotiation processes have long been and remain an important concern of research in the assessment of disability (Yoshida *et al.*, 1978; Pfeifer, 1980; Ysseldyke, Algozzine & Mitchell, 1982; Huebner & Hahn, 1990; Bradfiord, 1993; Ovretveit, 1993; Lacy & Lomas, 1993; Davie, 1993; Marks, 1992, 1993; Galloway, Armstrong & Tomlinson, 1994; Armstrong, 1995; Youngson-Reilly, Tobin & Fielder, 1995; Derrington, Evans & Lee, 1996; Gutkin & Nemeth, 1997; Yerbury, 1997; Mathie, 1997). This study suggests that professionals' decision making needs to be understood also within the inter-professional negotiation context, and that this may be captured within two schemas: one of search for consensus and one of searching for the promotion of one's perspective on the group formulation of the problem and its solutions. It has also illustrated possible consequences of the group's own development history on how these structures operate (cf. Christensen & Larson, 1993).

10.4.8. The application of three knowledge schemas of developmental disability

The three knowledge schemas

It was found that three major schemas of disability, namely the *disease*, *behavioural* and *psychodynamic* models, were applied with important implications for the formulation of the problem and its solutions in naturalistic decision making. This study was not focused on these models as such, and did not provide a sufficiently deep analysis of the models. Indeed one may be tempted to apply the same criticism to this study as that to Tyrer & Steinberg's second edition on "Models of mental disorders" (1993): "The book fails to say anything of profundity even if what it says is sensible" (Hughes, 1996). However, from a NDM point of view, the empirical findings in this study are a necessary exploratory pointer to the possible interrelations of a variety of concurrent frameworks activated during assessment (cf. Woods, 1993) and

thus serve as a basis for further deepening of the characteristics and implications for practice of each model. The main findings were that:

- The application of the models was related to the institutional setting as well as to disciplinary training.
- All three models were applied mainly within the *medical* model. In contrast to educational psychologists' focus on the system reported in Boreham *et al.* (1995), all models led to a search for a disorder within the child, though the *psychodynamic* and *behavioural* models contrasted with the *disease* model in a more pronounced consideration of child-environment interaction aspects.
- The parents of these children also held an even stronger focus on the *medical* model than the professionals - a similar perspective as adopted by the parents in Boreham *et al.* (1995).
- The *disease* model was complemented by a concern with supporting the parents in the coping process;
- An important contrast was found in the application of the *behavioural* and *psychodynamic* models to the diagnosis of autism with different judgements about causation and intervention decisions.

Bio-behavioural versus psychodynamic approaches to autism

The above last finding provided concrete evidence on the widely debated implications of bio-behavioural and psychodynamic approaches to autism. The first descriptions of autism by Kanner in 1943 had associated the syndrome in the child with "cold parents". This is now regarded as a "dead" theory:

> Since the 1960s it has been recognised that parental behaviour as such plays no role in pathogenesis. ... The interactional problems of autistic individuals arise from the child, not the parents. (Volkmar, Klin & Cohen, 1997, p.11)

The two favoured current theoretical approaches are those of the *disease* and *behavioural* models, based on the assumptions of causation by "neurologic / pathophysiological" dysfunctions and "psychologic / cognitive mechanisms";

the "etiologic" search for specific causes is related to one of these two factors (Rapin, 1997; cf. Bristol, 1996). Thus, in the recent edition of the international comprehensive handbook of autism (Cohen & Volkmar, 1997), there is only one reference to psychotherapy in a paragraph on "psychotherapy as a *related* service" within a legal rights chapter (Berkman, 1997).

The above research positions were reflected in the current data: the psychotherapist reported that one of the reasons she felt she shouldn't use the label of autism with the parents was that "if the parent gets hold of the [National] Autistic Society literature, then they will come to us saying there is no point in coming to see you" (E2int.Y). Indeed, even C2, who was Y's colleague in the health service, doubted the usefulness of the psychotherapeutic approach:

> I still have a question in my mind as to what difference that [psychotherapy] makes to the child. I am sure it makes a lot of difference to the family, but how does that change what a child is doing or experiencing, or feeling and I have got an open mind about that. (E2int.C2).

The evidence on the application of the two approaches did raise the main concern about psychogenic theories of autism: the psychodynamic interpretation led to serious loading of parental guilt on Cathy's parents, which research on autism has proved to be unwarranted (Volkmar, Klin & Cohen, 1997). Y's approach also represented the psychotherapeutic interpretation of child autistic behaviours as defensive mechanisms arising from parental inadequacy that could be healed: "The problems we observe in cognition, language, social and learning areas are, we believe, secondary to the emotional-affective or empathic disturbance ..." (Maratos,1998, p.211). This position has also been highly criticised by researchers, and was also criticised by H and C2.

On the other hand, Y's psychodynamic approach also strongly entailed three important principles in addressing early childhood disability:

- A belief that children with autism can make appreciable developmental progress if adequately supported. This is shared by all the educational literature on autism, but is highlighted more strongly in the psychodynamic approach, since the latter holds the belief that some children may be 'cured'. Like Maratsos (1998), Y made constant reference to children who had almost been completely cured.
- A strong belief that early intervention is essential for helping these children make significant progress. Again this is a widely shared understanding (Powers, 1992; Mesibov, 1997), and one of the 'fundamental principles' of the UK 1994 Code of Practice (see Lindsay, 1997).
- A belief that even when the child was engaging in repetitive behaviour, he or she was getting some meaning out of those activities, and thus implied an intrinsic valuing of the child as a person, even though the interpretation of these as defence mechanisms is only shared by psychodynamic practitioners. Indeed, even though Y had hypothesised that David's family had been inadequate in his regard, in her brief interaction with the parents, she still sought to focus on the meaningfulness of the child's activities, as well as on the father's relationship with the child. Again this search for child- and family-centred meaningfulness of assessment and intervention has become an increasingly important concern in disability issues (Armstrong, 1995). It is also very relevant to the implementation of one of the fundamental principles of the UK 1994 Code of Practice, namely the vital importance of the "knowledge, views and experience of parents" in the education of children with SEN (see Lindsay, 1997).

There is currently a strong feeling in the autism field against the psychodynamic approach because it puts the primary blame on parents which research has shown to be clearly unwarranted. But the psychodynamic approach may itself be changing that strong view, and may therefore be able to contribute to holistic approaches that value also the child's emotional-social being (cf. Maratsos, 1998). Thus, the strongly behavioural-oriented head of nursery (H) saw a dichotomy between the two approaches; but EP1 and A, though sharing H's skills-oriented concerns, found the influence of Y's

approach an enhancement to a holistic understanding and intervention with these children and their families.

10.5. Methodological value

One of the challenges faced by this study was the verbal protocol analysis of group discussion protocols. Substantial effort was spent in the development of the coding framework that could capture the whole goal structure of the assessment protocols. The iterative nature of this process is a common feature of this approach which has unfortunately led to "an extreme diversity of methods used, and ... virtually every new, major 'naturalistic' study includes some methodological innovations" (Woods, 1993, p.232).

However, the six task processes identified in the coding frame have been shown to apply fruitfully to assessment protocols in assessment of disability, with applications to both individual and group assessments. The coding frame is both parsimonious and relatively easy to apply, while being comprehensive enough to capture the whole protocol. The single-statement level of analysis is labour-intensive, and may be necessary for some purposes such as for the analysis of explanatory models of disability in chapter 8. However, given the episode-level of analysis constructed for this study, one may find such higher-level analysis sufficient for the investigation of the subgoal structure of assessment protocols and other possible purposes.

This coding frame can be used as a single method in information processing studies, or as a complement to discourse analytic approaches which are more relevant to studies on the negotiation structures in assessment. On the other hand, there is also a possibility of using the segmentation and coding system developed for this study at the episode level as a framework for a purely discourse and conversation analysis of assessment protocols. Such an

approach was not adopted in this study because of the initial focus on the information processing paradigm. Discourse analysis methodology was only added at a later stage when it was found that the information processing paradigm could not handle the negotiation structures effectively.

The holistic and naturalistic features of the methodological approaches adopted in this study make the findings relevant to practitioners in the field. They are also expected to be useful as tools for practitioners' reflective self evaluation as well as for professional training courses for education, health, and social welfare trainees.

10.6. Limitations

Need for experimental or other quantitative replication of findings

The above discussion has already shown some of the limitations of this study. The search for an understanding of the complex interrelationships of a number of phenomena, has led to indications of "possibilities" rather than probabilities of such relationships. Each of the findings of the study needs to be replicated in other case studies or in experimental research making use of the variables that have been identified in this study.

Limitations of tasks sampled

The above caution applies especially because the data was limited to pre-school children whose difficulties were suspected to lie within the autistic

spectrum. Assessment of older children, and of children with other disabling conditions may lead to different referral concerns and task elements.

Moreover, the four couples in the data do not represent the larger number of possible types of parent reactions to disability (see e.g. Gascoigne, 1996). The participants themselves also noted that different parents had a different impact on the dynamics of the assessment. For instance, in another case recorded at Site E, the guardian had a strong stance against special schooling for the child, a not uncommon stance which led to different group dynamics, but which was not represented in the data on the two Site E cases. Given the current development of inclusive education, this issue is bound to assume greater importance in assessments.

Another limitation of task variables is the restriction of the data to assessments consisting of one-off transdisciplinary assessments in a tertiary and a UK Education Code of Practice Stage 3 multidisciplinary assessment. As has been argued in the methodology, these are not the most typical of assessment settings. Different referral stages may carry different goals, such as those linked for directly to continuing intervention with the child and family. As this study has shown, different goals may activate different assessment frameworks. One cannot generalise the findings of this study to other stages of assessment and intervention.

Limitations of decision-maker samples

There were also important limitations regarding the decision-making groups. The professional groups involved were quite unusual: at Site M, the paediatric senior registrar was subordinate to the psychologist; at Site E, the psychotherapist had a dominant role; moreover, at Site E no medical personnel were present in the two cases studied (which was not completely typical of the Site itself).

Though references were made to individual characteristics of the professionals, this study did not address specifically the issue of differences in individual personalities of decision makers, which is becoming another important issue in naturalistic decision-making research (see e.g. Zsambok, 1997, p.10).

Another important decision-maker characteristic that has not been properly addressed in this study is the impact of level of expertise. One issue that was evidenced in the data but was not reported in the results was whether a decision-making focus in assessment of disability is associated with higher levels of expertise. Do more experienced professionals spend less time in actual assessment activity with the child? For instance, C1 at Site M, felt she did not need to do any assessment at all after the parent interview about Amy, since she had already reached a firm decision about Amy's diagnosis, which was the parents' and local services' main question. Similarly in a third case recorded at Site E but not used in this study, the experienced professionals gave little heed to the second observation session: they had formed their opinions during the interview and first observation session, and now felt the need to dedicate the time to deciding on the major issue of finding the best appropriate school placement and being able to sell that to the guardian and to the LEA. This contrasts with case E2, where the key-worker psychologist's (EP3) lack of experience in assessment of children with autism and in chairing of group assessments slowed the decision-making process: no formal decision was taken about the child's condition or placement despite EP3 having already previously written a Stage 3 assessment report.

Given all the above cautions, and that the coding system was model driven but developed in an iterative fashion, the study should be regarded as only an indication of areas for future data analysis and data collection (Beach *et al.*, 1997). This study has proposed one provisional model and highlighted the need for more descriptive research to balance the much larger prescriptive literature.

Limitations of focus of study

Finally, this study has focused on the *professionals as decision makers.* It has considered the influence of professional→client rather than client→professional negotiation frameworks. Understanding of both sides of the negotiation context is important to improve services (see e.g. Schopler, 1996). Moreover, given the current concern with consumer rights and the measure of professional efficiency in terms of quality of service to clients, the study of client perspectives assumes central importance (see e.g. Minke & Scott, 1993, 1995; Meredith, 1993; Armstrong, 1995).

Furthermore, the restriction of the database of this study to *tertiary* level services in health and education mentioned above, has been reflected in a restriction of the findings to those services' "narrow medical and educational conception of their purpose" (McConachie, 1997, p.5), namely the identification of conditions for which there are medical treatment or educational placement options. Thus, the data of this study have not sufficiently reflected the currently perceived need for a more primary-service-centred focus:

> Professionals' skills and knowledge need to be delivered through services which are local to where people live, which work in a variety of ways so as to be accessible to all children and families, and which utilise community facilities so that disabled children are included with other children. (McConachie, 1997, p.6)

This study did highlight the importance professionals gave to regarding the assessment event as only one in a continuing chain of services given to clients. The four cases studied also showed the impact of effective continuous services (for Amy and Cathy) versus inadequate health and education services (for Betty and David). However, the limitation of the study to one assessment event did not allow for the investigation of the local context within which initial services were received. While the increasing knowledge of more specific conditions of disability has led to, and does call for, the development of

specialist centres, the primary and secondary services have a critical role in meeting the needs of young children and their families. The latter services operate under serious constraints as shown in Betty's and David's cases (cf. Gerber & Semmel, 1984; Lunt *et al.*, 1994). These deserve to be studied more extensively if one is concerned with ensuring the provision of a quality service as early as possible for all children with developmental difficulties and their families within an inclusive philosophy.

The focus of this study on procedural, knowledge, goal and negotiation frameworks has also not investigated the related higher order framework of the *decision makers' value systems*. One can assume that the frameworks identified are an implicit reflection of the decision makers' values. However, there is also a place for investigating values directly during interviews. During the initial attempts at developing the coding frame, a few interviews were segmented and coded at the single-statement level and evidence of explicit value systems were found (cf. Leithwood *et al.*, 1993). This would, however, have overloaded the present study which was focused on the discussion protocols. The dimension of personal professional values was not pursued. However, it is recognised that values significantly influence decisions (see e.g. Svenson, 1996; Lindsay & Thompson, 1997), and the value dimension constitutes a research focus on its own. For instance, I had identified 25 "value" statements, and 37 "discipline orientation" statements in the first interview with the psychotherapist, from which a number of her belief categories about children's development and assessment approaches had been constructed such as that:

(1) All children can be helped;
(2) Early intervention is a must and is effective;
(3) Children and problems differ;
(4) Parents' feelings need to be respected;
(5) Assessment and therapy work should be based on what the clients brought up;
(6) Formal diagnosis should be communicated only if helpful to clients;

(7) As a psychotherapist, she had a personal and discipline interest in the emotional life of the child and family;

(8) In a multidisciplinary group assessment, a professional could effectively focus on his/her own specific interest as other aspects were thought about by other members;

(9) Professional beliefs are supported by experience of successful work with other individual children.

The following statement for instance was included in the first category:

> I think why I go to Site E is because I feel really quite enthusiastic really about bringing hope to people, that one really can't close off at too early an age. (E1int.Y)

The value dimension has to be inferred and requires a lot of thinking both in collecting relevant data as well as in its analysis. But it is certainly an area that requires more attention from researchers in assessment of disability.

10.7. Conclusion

The major contribution of this study has been to highlight the ill-structured nature of assessment of disability. It has also provided evidence for the usefulness of a NDM research approach with the following findings on assessment of early childhood disability:

- that there are at least four different types of decision-making frameworks that concurrently significantly impact the assessment process;
- that assessment of disability is a sequential process: it involves the testing and reviewing of hypothesis and action both within a single assessment event as well as in the continuous link between assessment events over time;

- that assessment in educational settings is also highly dependent on the diagnostic process;
- that different institutional settings give rise to different referral concerns and assessment goals and thus different situation assessments and recommendations;
- that different disciplinary approaches have important implications on situation assessment and recommendations;
- that in assessment of disability there is an important social interaction dimension: the inter-professional and professional-parent negotiation processes significantly impact the formulation of the problem and recommendations for giving support to the child and family.

It is suggested that the qualitative coding system developed in this study could serve as a useful tool both in research on decision making in assessment as well as in the training of professionals or in their reflective practice.

Finally, the study has a number of limitations mostly arising from its exploratory nature and limited data base. Further replication case studies and experimental studies, for instance using vignettes but including as much as possible naturalistic conditions identified in this study, are recommended.

Chapter 11

CONCLUSION

11.1. A study on professional decision-making skills

The acquisition of "professional decision-making skills" has been identified internationally as one of the six core goals of professional training for school or educational psychologists (cf. Witt & Cavell, 1986; Pearson & Howarth, 1982; Pearson & Lindsay, 1986; Lunt, 1991; 1993; Lunt & Lindsay, 1993; Lunt & Pomeranz, 1993; Halliwell & Williams, 1992, 1993; Wolfendale, 1993; Sheppard, 1995; Dale, 1996; cf. Zsambok, 1997):

> Responsibilities for diagnosis and intervention demand much more than cookbook approaches to making decisions. ..... Decision-making skills allow professionals to view psychological knowledge as evolving rather than fixed and facilitates open-ended approaches to disciplined enquiry when they are faced with the complexity of unclear guidelines in new and diverse situations and when existing knowledge does not address issues adequately. In addition, a consideration of contextual conditions that influence child growth and development requires reflective approaches to decision making. (Cunningham & Oakland, 1998, pp.23-24)

This study has addressed the above goal by seeking to identify and describe how professionals in the field combine the application of a multiplicity of frameworks as they seek to reach decisions about a child with disability, about his or her family and about related local health and education services.

11.2. A comprehensive framework for decision making in assessment of disability

The main value of the findings in this research has been the construction of a comprehensive framework within which to reflect upon and research the major structures that constitute expertise in decision making in early childhood disability. The study has identified procedural, knowledge, goal, and negotiation structures in assessment, and described ways in which these were activated concurrently or in alternation. It has pointed out possible impacts such structures can have on the decision-making process in assessment. While the study has been limited to the application of these structures in the few particular contexts used in this study, it is suggested that the frameworks themselves may be useful for researchers and for practitioners and trainee professionals in other contexts in the health, education and social services.

The analysis of actual interaction among professionals and between professionals and parents has highlighted the need for professionals in the field to develop expertise in combining the multiplicity of factors that affect the quality of service received by each individual consumer. It is by developing a sensitivity to the concurrent influences in each case that the best understandings and decisions can be reached. The development of such skills requires reflective experience in the environment in which trainees are expected to operate (Cannon-Bowers & Bell, 1997). This study has provided a tool to support trainees' reflections on practice. It has also provided a tool for continuing education for practitioners in the field who are expected to find the analysis of naturalistic frameworks relevant to their real work settings (Barrows & Feltovich, 1987; Woods, 1993; Beach *et al.*, 1997).

11.3. The need for professional skills beyond expertise about specific forms of disability

This naturalistic study has confirmed the need for professionals to develop expertise in the understanding of the specific type of disability they are asked to assess. Autism is a low-incidence disability, but there is an ever increasing useful volume of knowledge about assessment and support for children with autism (Cohen & Volkmar, 1997) that makes professionals' work much more effective. The Site E professionals were hindered by lack of specialist knowledge. As Boreham *et al.* (1995) observed with regards to EPs' assessment of emotional and behavioural difficulties, this study calls for professionals to develop expertise in relevant areas of disability.

However, this study has also pointed out more strongly that, for the achievement of a quality and ethical service to consumers (see e.g. Simeonsson *et al.*, 1995; Kristensson-Hallstrom & Nilstun, 1997), such expertise is not sufficient. Professionals have a further essential need for the development of communication skills in professional-client interaction (see e.g. Cottrell & Summers, 1990; Murphy, 1990; Buckman, 1992; Minke & Scott, 1993; Evans, Coman & Goss, 1996; Dale, 1996; Siegel, 1997), as well as in inter-professional relations (see e.g. Christensen & Larson, 1993; Marks, 1993; Ovretveit, 1993; Galloway *et al.*, 1994; Dale, 1996; Mathie, 1997). Thus, parental participation is seen both as a necessary part of effective support for the child's development as well as a right recognised by legislation (Minke & Scott, 1993; Klin *et al.*, 1997; Lindsay, 1997). Moreover, engaging the family in assessment activities and their interpretation serves as an intervention in its own right (Shea, 1993). The goal of ensuring parental participation cannot be achieved without ascertaining the parents' expectations, perceptions and concerns of the problem (Simeonsson *et al.*, 1995; Kristensson-Hallstrom & Nilstun, 1997). These aims require the development of professional communication skills such as for empathising with client feelings, eliciting client understandings and questions - also through advocacy, sharing information constructively with the client (Gill & Maynard,

1995; Abrams & Goodman, 1998), and linking each service to previous and next steps in supporting the child and family and related services (cf. Buckman & Kason, 1992; Simeonsson *et al.*, 1995). Such skills have also to include an openness and sensitivity to "the conflicting values which often lie behind the decisions which teachers and others involved in special needs education have to make" (Wedell, 1997, p.iv; cf. Schopler, 1996). Developing professionals' awareness of the multiplicity of frameworks that may be influencing their decision-making would be a first step.

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APPENDIX I:
COPIES OF INVITATION AND CONSENT FORMS FOR PARTICIPATION IN THE RESEARCH ADDRESSED TO PROFESSIONALS AND TO PARENTS

How would you be involved?

It is proposed that the team meeting/s concerning one of your clients, and the meeting with the parents if held separately, would be videotaped.

You would also be interviewed individually by myself for about half an hour about the assessment process. This would take place within a week following the team conference.

I assure you that all these data will only be used for analysis of the assessment and intervention process.

The consent of the client/s will be sought in advance.

Feedback

As a team you will be offered feedback from the analysis.

Looking forward
to
meet you
and
learn with you

Paul A. Bartolo

Department of Psychology

University of Malta

Msida MSD 06

Tel: 32902927 / 336451 Ext.2927

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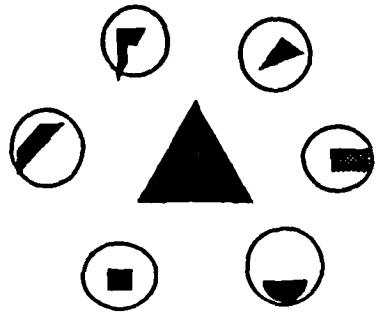
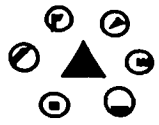
Msida - Malta

FACULTY OF EDUCATION

You can help improve multidisciplinary team-work



Dear Colleague in multidisciplinary team-work



Research on

Multidisciplinary assessment and intervention in early childhood disability

Multidisciplinary team-work

Team-work is always a challenging way of carrying out a task.

When a team is multidisciplinary and the task is assessment and intervention with children with disability and their families, the challenge becomes even greater.

How does it work?

- There is an increasing amount of literature suggesting how this multidisciplinary team-work *should* be carried out.
- However, there is still a lack of information on how teams *actually* go about their task.
- It is understood that different teams work equally effectively in a variety of ways and at the same time that there are probably common elements in that variety.

Ph.D research

As multidisciplinary team-work is increasing, it would be helpful to both research and team development work if we could understand better the different group assessment and intervention processes.

I am a psychologist from Malta, myself involved in such team-work, and I have been working part-time on my Ph.D programme at the Insitute of Education, University of London, since October 1993.

I would like to invite you and your team to take part in this study involving several assessment-teams: your experience of such assessment and intervention procedures would be an important contribution to this area of research.

Confidentiality

I assure you that your contribution will be confidential as this is an essential part of my research. All data will be used only for analysis of the assessment and intervention process and all steps will be taken to ensure anonymity.

How teams of professionals assess children with special needs

The study is intended to make teams of professionals more aware of how they usually go about their task of assessing and determining provisions for children with special needs. This will make it easier for professionals to evaluate their own work for the benefit of children with special needs and their families.

Participation is voluntary.

Your participation or otherwise in this study will make no difference to the usual services offered by the team in the assessment of your child.

Moreover, if you decide to participate, you would still be completely free to withdraw from the study at any time and for any reason.

If you have decided to participate, please sign your name/s in the box below:

I have considered the requirements listed in this leaflet. I would like to participate in this study on the assessment of children's special needs by a team of professionals:

Looking forward
to meet you
and
learn with you

Paul A. Bartolo

Department of Psychology

University of Malta, Msida MSD 06, Malta

Tel: (356) 32902927 / 336451 Ext.2927

Fax: (356) 336450

or

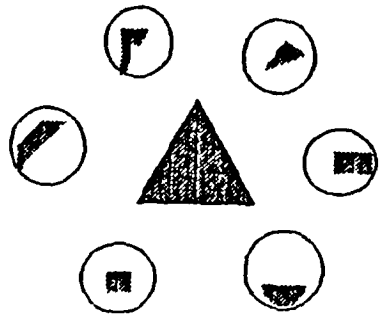
Department of Educational Psychology & Special Educational Needs

Institute of Education, 25 Woburn Square, London, WC1H OAA

Tel 0171 580 1122 Fax 0171 612 6304

Msida - Malta
FACULTY OF EDUCATION

You can help professionals in their assessment of children with special needs



Dear

Mr Mrs Dr

Ms & First .....

In research on

HOW TEAMS OF PROFESSIONALS WORK TOGETHER IN ASSESSING CHILDREN'S SPECIAL NEEDS

What is being studied

I am an educational psychologist and university lecturer from Malta. I am carrying out part-time postgraduate studies at the University of London, Institute of Education. My research programme began in October 1993. I am now collecting information about what is actually happening in assessment of young children with special needs

This study is about the work of teams of professionals involved in assessment of young children with special needs in the UK and Malta. I am trying to see how they share their expertise as a team and with you; how they determine what are the problems and what is best for a child and his or her family

The results of this study should be helpful for teams of professionals in trying to understand and decide on the best provisions for children with special needs

Why & how would you be involved

Your experience of having your child assessed by a team of professionals would greatly help in carrying out this research I would therefore like to invite you to participate in this study.

With your consent, there would be an audio-recording of team discussions about your child and any other team meetings with yourself

You would also be interviewed individually by myself for around half an hour about your own views on the assessment of your child. This interview would be audio-taped It would be arranged at your convenience within one week after the assessment

Confidentiality

I assure you that your contribution will be confidential as this is an essential condition for my research. All data will be used only for analysis of the assessment and intervention process and all steps will be taken to ensure anonymity

APPENDIX II:
POST-ASSESSMENT INTERVIEW SCHEDULE FOR PROFESSIONALS AT SITE E

This is the version used for Site E. It was slightly modified for Site M to adapt it to a different scheduling of the assessment procedure. A more modified version was used for the parents.

Introduction:

This interview is an attempt to give you an opportunity to explain what were your concerns, how you understand and what you tried to achieve and decided about this case. So I would like you to go over the case from the beginning when the case was first referred to you, to your investigation about it and your involvement up to now.

We are influenced in a variety of ways in our decisions. If you can tell me about those influences that you think actually had an impact on your decisions about this case, it will enrich my research and make it more useful to all of us.

Throughout I would like you to explain the reasons why you were concerned, why you sought any particular information and why you used any particular method, and why you made any particular judgement and took whatever decision about the case.

Phase 1: problem solving aspects:

1. IDENTIFICATION

1 How was this case brought to your attention? Why?

2 Who did you consider as your clients in this case? Why?

3 Did you seek or receive any information before meeting the rest of the team? Why?

4 Had you formed any opinion as to what the case was about? If so what did you think the problem was?

2. CONCEPTUALISATION AND PROBLEM ANALYSIS
(Acquiring, storing and retrieving information)

2.1. Large team:

5 What questions or ideas did you have at the initial meeting of the team?

6 What information did you gather at that point?
From whom? Why?

7 Did you form any opinions?

8 Did you figure out what the problem was about?

9 Were there any particular questions that you thought you would like to ask to the parents, or seek to answer through observation?

2.2. First observation:

10 What were your goals for the first observation? Why?

11 Were there any particular activities or behaviours you wanted to observe?

12 Were you happy with the arrangements?

13 What information did you gather at that point?

14 Did you change any of your previous opinions or form any new opinions about the case?

15 Did you figure out what the problem was about?

16 Were there any questions that you still wanted to find out about?

17 Did you get an opportunity to share all your impressions and questions?

18 Did you take any decisions about other information you wanted to get from the next observation? Why?

19 About assessment method and instruments? Why?

2.3. Second Observation

20 What were you out for in the second observation? Why?

21 Were you happy with the arrangements? Why?

22 What information did you gather at this point? Why?

23 Were there any surprises?

24 Did you modify any opinion or form any new judgement? Why?

25 Was there any other information you would have liked to gather about the child and family? Why?

3.1 MANIPULATING AND USING INFORMATION: INDIVIDUAL

Before the final team discussion with the parents, to what extent had you:

26 Formulated any diagnosis?

27 Based on what evidence?

28 Formulated any prognosis?

29 On the basis of what evidence?

30 Had you decided on any particular intervention?
31 Why?

32 Did you develop any particular image of this child?

33 Did he/she bring to mind any other similar cases?

3.2 MANIPULATING AND USING INFORMATION: TEAM

34 Were there any questions you wanted to ask the other team members or the parents? Why?

35 Were you happy with the information you got from the rest of the team and the parents? Why?

36 Were there any issues which you decided to keep to yourself? Why?

37 What were the main conclusions of the team conference as far as you are concerned? What was their importance and why?

38 Did the discussion deal with all the main questions you had about the case?

39 Would the discussion have been different in any way if the parents had not been there?

40 Do you still have any questions about the case? Why?

41 How do you see the case now? Why?

42 How did the conference influence, if at all, your thinking about the case? Why?

43 Will you be involved in intervention with the case? Why?

44 What outcomes would you expect about the case? How would you evaluate intevention? Why?

45 How does this case compare, if at all, with other cases the team and you yourself have dealt with? Why?

46 What opinions were communicated to the parents?

47 What decisions were communicated to the parents?

48 Were there any decisions which were too difficult to communicate to the parents?

49 Did you change any of your opinions or recommendations while discussing them with the parents?

50 What do you think the parents wanted out of this assessment?

51 How far did you try to answer them? Why?

52 What do you think did the parents get out of this assessment?

3.4. Reporting

53 There will be a written report about the case. Do you regard the written report as important? Why?

54 What will it achieve? Why?

Phase 2: 'Political' aspects:

4. PERSONAL AND GROUP INTERESTS AT THE CONFERENCE

55 How did you feel at the case conference? Why?

56 How was doing this assessment within the team different than if you had done it on your own? Why?

57 Were you satisfied with your participation?

58 With the participation of your team mates?

59 Was there any information that you thought not necessary to share with the others? Why?

60 Were your relations during this assessment helping towards achieving your aims?

61 What would have been missed if this child had not been assessed by your team?

62 When you look back, was there anything you would have done differently on reflection?

63 How do you compare this assessment to others you have participated in?

64 Is there anything particular about cases regarding communication and behavioural disorders?

APPENDIX III:
EXAMPLES OF SEGMENTATION AND CODING, SHOWING SINGLE-STATEMENT, SUBGOAL AND MAIN GOAL LEVELS OF ANALYSIS

III.1. Segmentation and coding at the statement-by-statement level

The discussion protocols are seen as reflecting the shared line of thinking of the professionals and parents. As this study was an attempt to construct a whole structure of the protocols (see Voss, 1988), a*ll* the text was segmented. Each single statement represents one simple problem-solving reasoning move within the coding framework - 6 *task* process and 3 *group* process codes. Each statement is equivalent to a simple sentence, but may also be made up of a phrase or more than one sentence. Every turn of talk, however short, even a "Yes" or "No", entailed a separate segment. The functions of each single statement could be any of those listed in Table 5.3.4.2a, above.

As each statement was segmented and coded, a summary of the content was included in the code. This process served also as a test for segmentation: if a segment required more than one clause in the paraphrase, it was split into further segments corresponding to the relevant number of clauses.

An example of the segmentation and coding is given below (see Figures III.1, 2 & 3). Figure III.1 shows the segmentation of an extract, actually a whole MAIN GOAL including six subepisodes and inferred SUBGOALS (SUB d02-d07) taken from Protocol M1.d (Professionals-only Evaluation).

Figure III.1: Example of text segmentation at single statement level

(e.g. of MAIN GOAL M1:D2 EXPLAIN & DESCRIBE CHILD'S LEVELS & PATTERNS OF FUNCTIONING: GLOBAL DELAY NOT AUTISM)

Extract from transcription of E1Prot.d (Professionals-only Evaluation)	Extract's segmentation into single statements
S: I mean she's got, she looks to me like very globally delayed. It doesn't look anything autistically about her.	S: I mean she's got, she looks to me like very globally delayed. //It doesn't look anything autistically about her.
P: No.	P: //No.
S: Because she is, she's got, the two things she was doing, I mean, she's got lovely referential eye-gaze when she wanted, em. For two things she was looking at her mum, I thought she was sharing joint attention with that little mouse when she got excited about it.	S: //Because she is, she's got, the two things she was doing, I mean, she's got lovely referential eye-gaze // when she wanted, em. For two things she was looking at her mum, // I thought she was sharing joint attention with that little mouse when she got excited about it.
C: Well, I couldn't decide whether it was delayed shared attention or, a request.	C: // Well, I couldn't decide whether it was delayed shared attention or, a request.
S: I think she was doing both. I think on two different occasions it was for two different reasons.	S: // I think she was doing both. // I think on two different occasions it was for two different reasons.
P: Yes. And she certainly, when she got excited, she looked at mum.	P: // Yes. // And she certainly, when she got excited, she looked at mum.
S: Yes. She did look at her for that. And looked at her when she, looked at her and handed it to her when she wanted it rewound. Em, and she responds to gesture, she understands gesture. And she's got early symbolic, well, copying, brushing, one would have to say; she's probably just pre-doing it: so functional use of objects. Em, I don't think she was recognising the pictures; I don't think she understood that at all.	S: // Yes. She did look at her for that. // And looked at her when she, looked at her and handed it to her when she wanted it rewound. // Em, and she responds to gesture, // she understands gesture. // And she's got early symbolic, // well, copying, brushing, one would have to say; // she's probably just pre-doing it: // so functional use of objects. // Em, I don't think she was recognising the pictures; // I don't think she understood that at all.
P: No, I was looking into that actually.	P: // No, // I was looking into that actually.
S: Em. But she did, she had early contextual understanding: she did 'Give dolly a kiss', 'Give it to mummy' - and she those were without any gesture.	S: // Em. But she did, she had early contextual understanding: // she did 'Give dolly a kiss', 'Give it to mummy' - // and she those were without any gesture.
P: Yeah.	P: // Yeah.
S: Em.	S: // Em.
C: She's got the cognitive and communication skills of round about the 12-month level.	C: // She's got the cognitive and communication skills of round about the 12-month level.
S: That's what I was thinking.	S: // That's what I was thinking.
P: Yeah.	P: // Yeah.

C: But the pattern is just slightly different, because, because she's three. But it's not an autistic pattern.	C: // But the pattern is just slightly different, because, because she's three. // But it's not an autistic pattern.
S: No.	S: // No.
P: No. If anything it's her sort of stereotypy, isn't it?	P: // No. // If anything it's her sort of stereotypy, isn't it?
C: That's right. Her stereotyped hand movements *	C: // That's right. // Her stereotyped hand movements *
S: Don't a lot of children with learning difficulties do that? Because I haven't seen a sort of straight learning difficulties for a long time.	S: // Don't a lot of children with learning difficulties do that? // Because I haven't seen a sort of straight learning difficulties for a long time.
P: Well, I've certainly, I've seen more kids with epilepsy and severe learning difficulties who've done that.	P: // Well, I've certainly, // I've seen more kids with epilepsy and severe learning difficulties who've done that.
S: And they do that thing? She was looking to me at sort of right of her eyes, was she turning her head to look?	S: // And they do that thing? // She was looking to me at sort of right of her eyes, // was she turning her head to look?
C: Oh, I think that's a mannerism.	C: // Oh, I think that's a mannerism.

III.2. Coding indexing system at single-statement level

Figure III.2, below, shows the code indexing system used at the single-statement level. Figure III.3, below, shows the coding by the author of the protocol segmented in Figure III.1, above.

The coding system is quite simple to apply: each segment is assigned a **d, e, p, r, i, g, q,** or **v** as each one stands for a separate code (**d**escribe, **e**xplain, **p**redict, **r**ecommend, plan **i**mplementation, administer the **g**roup process, elicit client **q**uestions, or **e**valuate the process - see #5.3, above). This is the system adopted by coders in thematic analysis of texts. This was the system used by the second coder to check for reliability.

However, because this was an exploratory study, a more complex system was used by the author. Thus, it was found useful to add a subcode to the main codes to indicate the content to which the problem solving process was being applied. The result, as shown in the example in Figure III.3, below, appears quite complex to a reader unfamiliar with the specific content of assessment of children with difficulties within the autistic spectrum. However, it is not more complex than coding systems in verbal protocol analysis (see e.g. Green & Gilhooly, 1996). The use of subcodes at the first level of coding was helpful in the analysis at later levels.

Other information was included in each coded segment. Each coded segment included the following four extra items of information apart from the process code (see also Figure III.2, below):

i. As is usual in verbal protocol analysis in problem solving, it was important to keep an *index of the sequence* of the coded segments: thus each coded segment had to have a serial number index. This was also necessary for grouping coded segments into larger subepisode segments.

ii. Secondly, while coding each statement according to the nine categories of *processes* of the coding frame, *a specification of the content categories* was added (see Tables 5.3.3.3 and 5.3.3.4, above). Thus while **d** would indicate the code **describe**, **ds** would indicate that the coded segment was a **d**escription of the child's ***s**ocial interaction.*

iii. Moreover, in order to be able to use coded segments as a basis for constructing the schemas of *each* professional and parent, it was also important to keep an index of *who was making the statement*: C, P, S, M or F.

iv. Finally, in order to be able to make use of the coded segments for later processing even without referring to the raw text, it was important to include *a summary of the content* of each segment.

Figure III.2:
Four indexes in coding system at single statement level

011 **ds** S Got lovely referential eye gaze.

Key:

011 = the serial number of the segment in the protocol - in this case from 011 to 053;

ds = **d** = **d**escribe (the code *process* category); and
s = *social interaction* (a subdivision of **d**escribe by *content)*

S = the speaker, in this case the Speech pathologist;

Got lovely ... = a summary of the statement

III.3. Example of application of coding system

Figure III.3 below gives an example of the coding system to an extract from Prot.M1d (Professionals-only evaluation discussion). The segmented extract is shown on the left and the codes on the right (see key for codes on following page). Coding categories on the right are shown in **bold** and at the three hierarchical levels (see Figure 5.3.4.4 above):

- **MAIN GOAL** level
- **SUB** GOAL level
- **Single-statement** level.

Figure III.3:
Example of coding at three levels from Prot.M1.d
(Professionals-only discussion):
- **inferred MAIN goal level: with one main goal, MAIN GOAL D2;**
- **inferred SUBgoal level: with seven subgaols, SUB d02-d07;**
- **single statement level: with indexes of segment sequence, *process* code with attached *content* specification subcode, index of speaker, and summary of content.**

Segmented text	Coding of segments
	MAIN GOAL D2: EXPLAIN & DESCRIBE CHILD LEVELS & PATTERNS OF FUNCTIONING: GLOBAL DELAY NOT AUTISM
	SUB d02 (008) S EXPLAIN: STATE DIAGNOSIS
S: I mean she's got, she looks to me like very globally delayed. //It doesn't look anything autistically about her.	008 **e/*ab*** S Looks to S very globally delayed 009 **e/*ab*** Doesn't look autistic
P: //No.	010 **e/*ab*** Agrees not autistic
	SUB d03 (011) S DESCRIBE: HAS REFERENTIAL EYE-GAZE & SHARED ATTENTION
S: //Because she is, she's got, the two things she was doing, I mean, she's got lovely referential eye-gaze	011 **d/** S Got lovely referential eye gaze
// when she wanted, em. For two things she was looking at her mum,	012 **d/** S Looked at mum for 2 things
// I thought she was sharing joint attention with that little mouse when she got excited about it.	013 **d/** S Shared joint attention with mum when excited re mouse

C: // Well, I couldn't decide whether it was delayed shared attention or, a request.	014 **d/** C Could not decide if delayed shared attention or a request?
S: // I think she was doing both.	015 **d/** S She was sharing attention & requesting
// I think on two different occasions it was for two different reasons.	016 **d/** S Shared attention in two instances for different reasons
P: // Yes. // And she certainly, when she got excited, she looked at mum.	017 **d/** P Affirm S 018 **d/** P When got excited looked at M
S: // Yes. She did look at her for that.	019 **d/** S Did look at M to share excitement

// And looked at her when she, looked at her and handed it to her when she wanted it rewound.
// Em, and she responds to gesture,
// she understands gesture.
	020 **d/** S Also looked at M handing toy to be rewound
	021 **d/** S Responds to gesture
	022 **d/** S Understands gesture

	SUB d04 (023) S DESCRIBE NON-VERBAL FUNCTIONING

// And she's got early symbolic,
// well, copying, brushing, one would have to say;
// she's probably just pre-doing it:
// so functional use of objects.
// Em, I don't think she was recognising the pictures;
// I don't think she understood that at all.
	023 **df** S Has early symbolic skills
	024 **df** S Copied brushing
	025 **df** S Probably just pre-symbolic
	026 **df** S Has functional use of objects
	027 **df** S Not recognising pictures
	028 **df** S Did not understand picture task

P: // No, // I was looking into that actually.	029 **df** P Affirms S 030 **df** P Was assessing picture understanding
	SUB d05 (031) S DESCRIBE COMPREHENSION SKILLS

S: // Em. But she did, she had early contextual understanding:
// she did `Give dolly a kiss', `Give it to mummy' -
// and she those were without any gesture.
	031 **d/** S Had early contextual understanding of verbal command:
	032 **d/** S Did 'Give dolly kiss', 'Give it to mum'
	033 **d/** Obeyed commands without gesture

P: // Yeah.	034 **d/** P Affirms S
S: // Em.	035 **d/** S Hesitates
	SUB d06 (036) C EXPLAIN: STATE LEVELS & PATTERNS OF FUNCTIONING
C: // She's got the cognitive and communication skills of round about the 12-month level.	036 **e***lab* C Cognitive & communication skills round 12mth level

S: // That's what I was thinking.	037 *elab* S Affirms C
P: // Yeah.	038 *elab* P Affirms C
C: // But the pattern is just slightly different, because, because she's three. // But it's not an autistic pattern.	039 *elab* C Pattern of skills varies slightly because age 3 040 *elab* C But not autistic pattern of skills
S: // No.	041 *elab* S affirms C
P: // No.	042 *elab* P Affirms C
	SUB d07 (043) P EXPLAIN: STATE STEREOTYPY PART OF GLOBAL DELAY NOT AUTISM
// If anything it's her sort of stereotypy, isn't it?	043 *elab* P If anything autistic its her stereotypy
C: // That's right. // Her stereotyped hand movements *	044 *elab* C Affirms P 045 *df* C Has stereotypic hand movements
S: // Don't a lot of children with learning difficulties do that? // Because I haven't seen a sort of straight learning difficulties for a long time.	046 *elab* S Don't lot of children with LD have stereotypies? 047 *elab* S Asking if LD includes stereotypies because not seen straight LD for long time
P: // Well, I've certainly, // I've seen more kids with epilepsy and severe learning difficulties who've done that.	048 *elab* P Has seen stereotypies in LD 049 *elab* P Seen more kids with epilepsy & SLD with stereotypy
S: // And they do that thing?	050 *elab* S Asks if children with SLD also have side glance
// She was looking to me at sort of right of her eyes, // was she turning her head to look?	051 *db* S Child was using side glance 052 *db* S Not sure if child was turning her head to look.
C: // Oh, I think that's a mannerism.	053 *db* C Thinks child's side glancing was a mannerism

Key: C = clinical psychologist; P = Paediatrician; S = Speech Pathologist.
d*b* = describe behaviour; **d***f* = describe functional levels; **d***l* = describe langauge;
d*C* = state Constraint on description of language;
e*lab* = explain classification of child's difficulties.

APPENDIX IV:
SEQUENTIAL GOAL STRUCTURES OF EACH CASE AND SITE, BY CYCLES, MAIN GOALS AND SUBGOALS

IV.1. Introduction

All protocols were subjected to a verbal protocol analysis as explained in Chapter 5, above. This analysis led to the derivation of:

- A sequential structure of all **Subgaols** in each case.
- These sequential subgoals were then clustered into a smaller number of sequential **Main goals** in each case.
- These main goals in each case were then divided into three sequential **Cycles** *of problem solving and decision making.*
- The main goals in each Cycle of the two cases at each Site were compared and one **common schema for each Cycle** at each Site was derived.

The results of this analysis are presented here in the next two sections:

IV.2: Common schemas for the two cases at each Site:

These are presented sequentially in Figures IV.2.1 - IV.2.3, first the three Cycles at Site M, and then the three Cycles at Site E:

Site M Cycles: IV.2.1M; IV.2.2M; IV.2.3M

Site E Cycles: IV.2.1E; IV.2.2E; IV.2.3E

IV.3. Comparisons between the MAIN goals of each case, with subgoals attached

These are presented sequentially in Figures IV.3.3.1 -IV.3.3.3, first the three Cycles for Site M and then those for Site E. For each Cycle, there are first (a) the **comparative figures** of the MAIN goals; followed by (b) **the MAIN goals with SUBgoals attached**:

Site M Cycles:

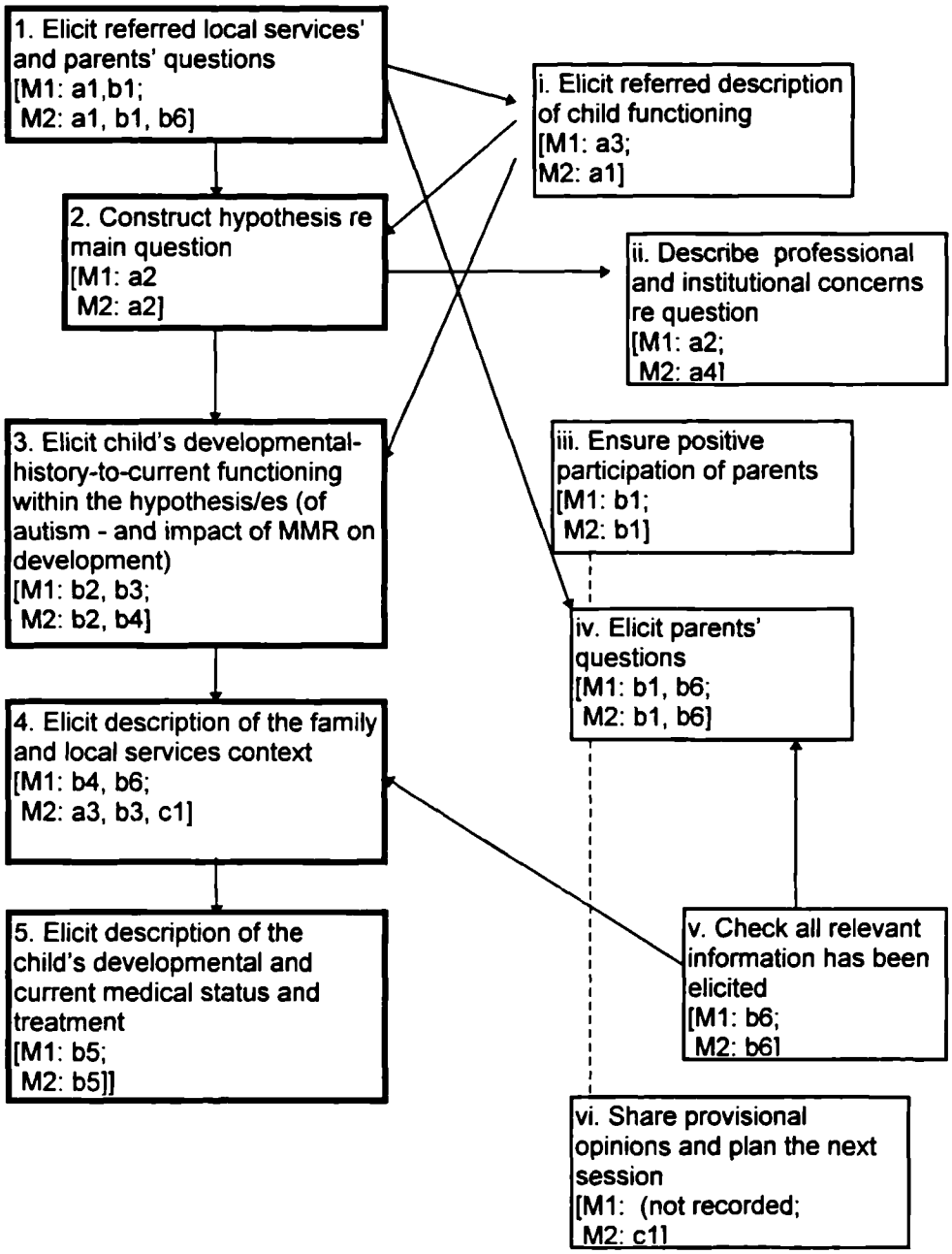
IV.3.1Ma (MAIN gaols only);	IV.3.1Mb (MAIN & SUBgoals attached);
IV.3.2Ma	IV.3.2Mb
IV.3.3Ma	IV.3.3Mb

Site E Cycles:

IV.3.1Ea (MAIN gaols only);	IV.3.1Eb (MAIN & SUBgoals attached);
IV.3.2Ea	IV.3.2Eb
IV.3.3Ea	IV.3.3Eb

IV.2 Common schemas for the two cases of each Site

Figure IV.2.1M
A common sequential main goal schema in CYCLE 1 of M1 & M2

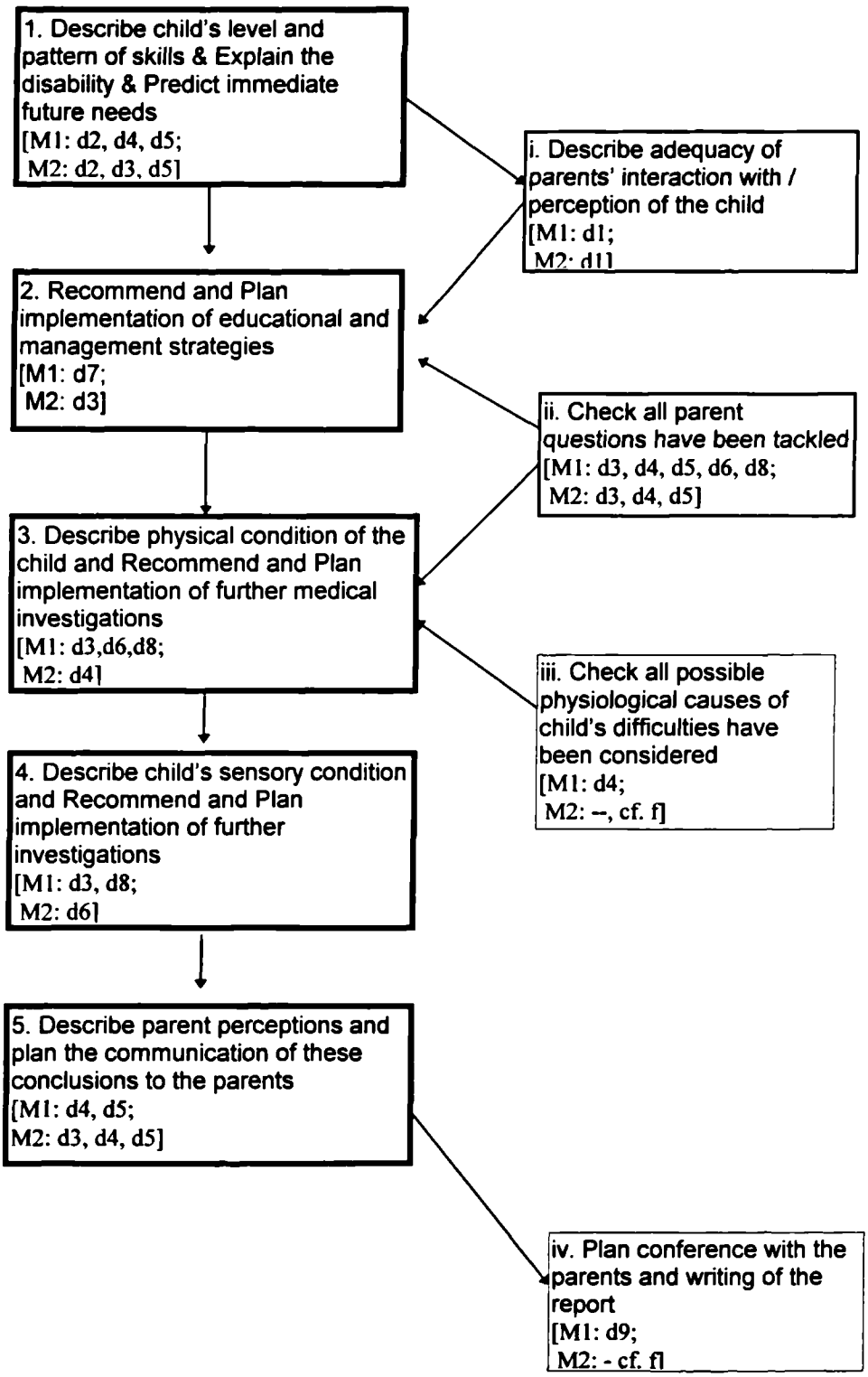


Key: ▭ = TASK process goals; ▭ = GROUP process goals

M1:a1,b1 = Derived from the first MAIN goals of ProtM1a (Initial Referral Meeting) and ProtM1.b (Interview with the parents)

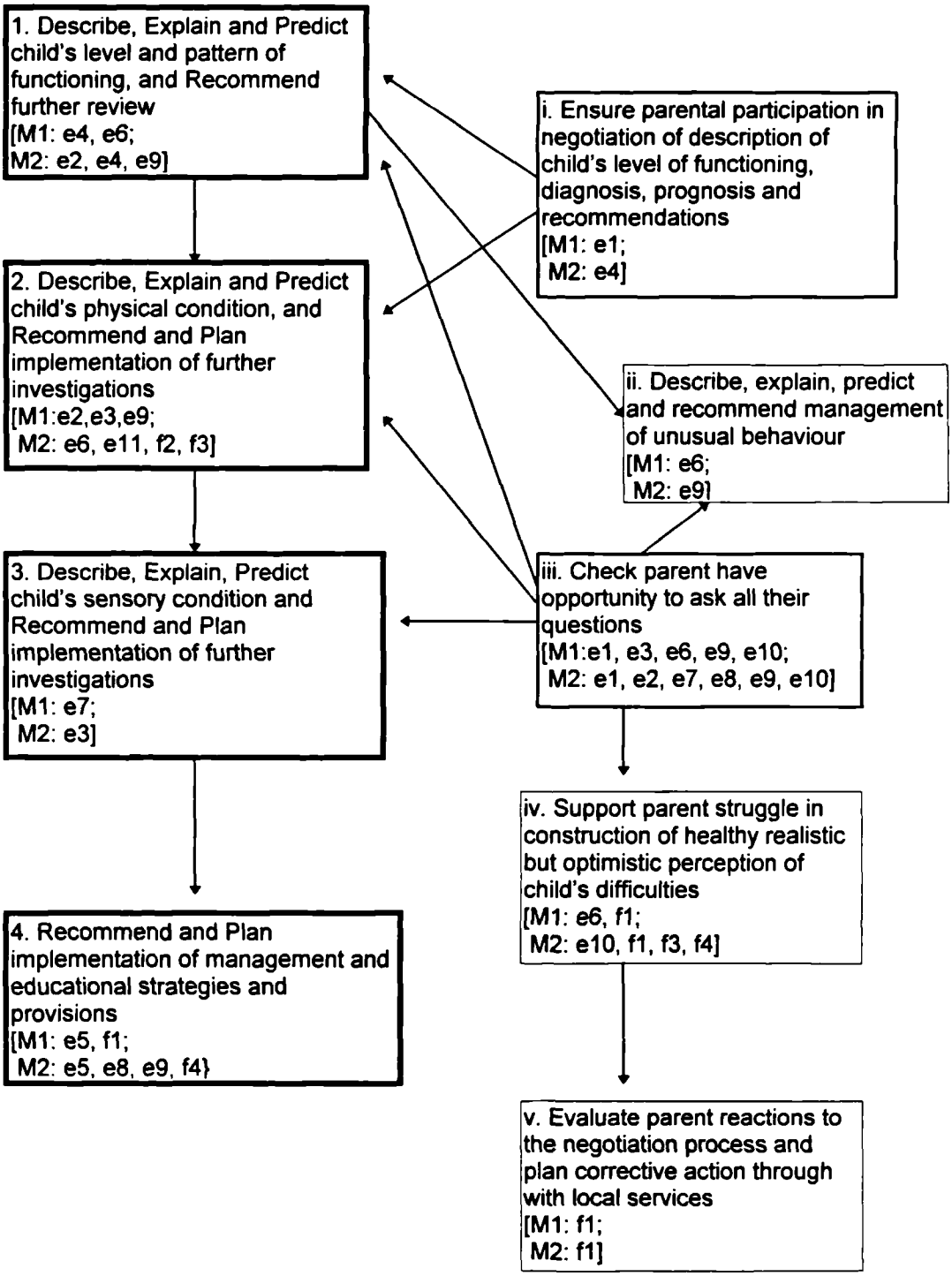
FigureIV.2.2M

A common sequential main goal schema in CYCLE 2 of M1 & M2

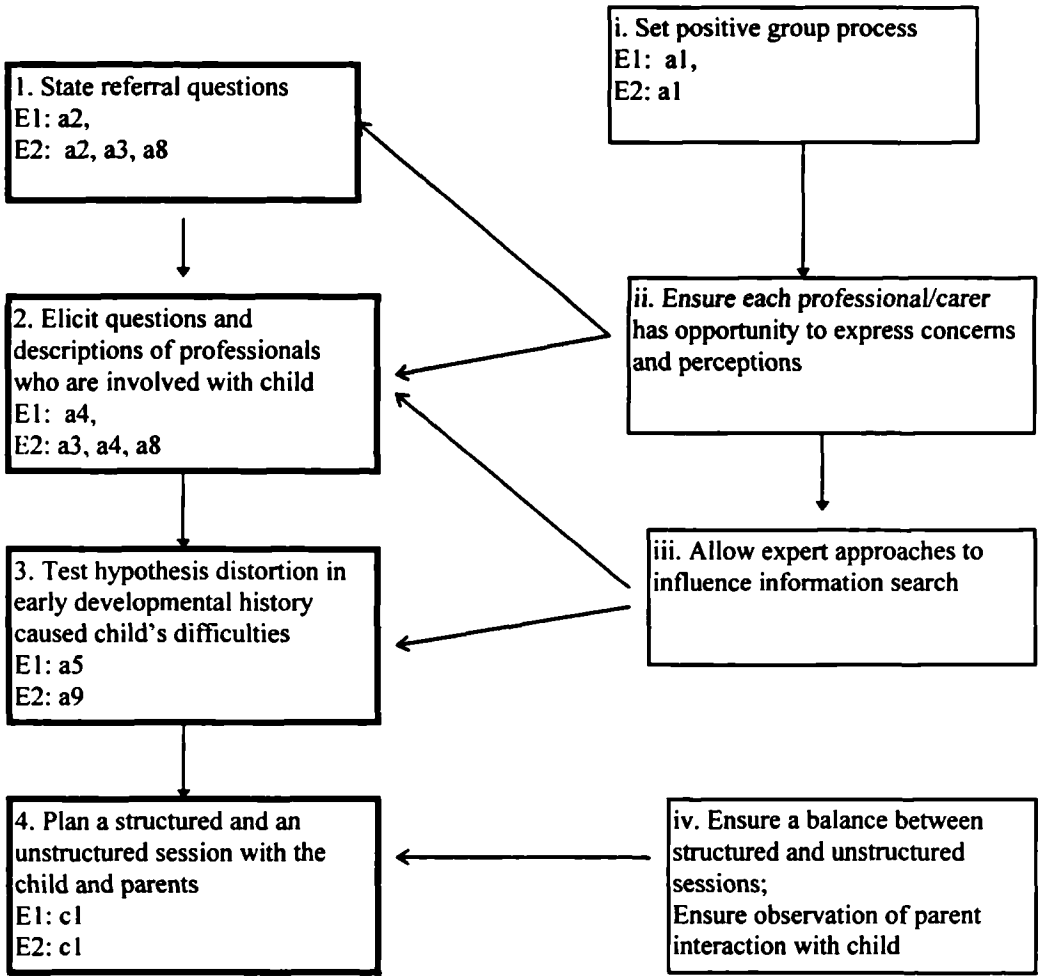


FigureIV.2.3M

A common sequential main goal schema in CYCLE 3 of M1 & M2

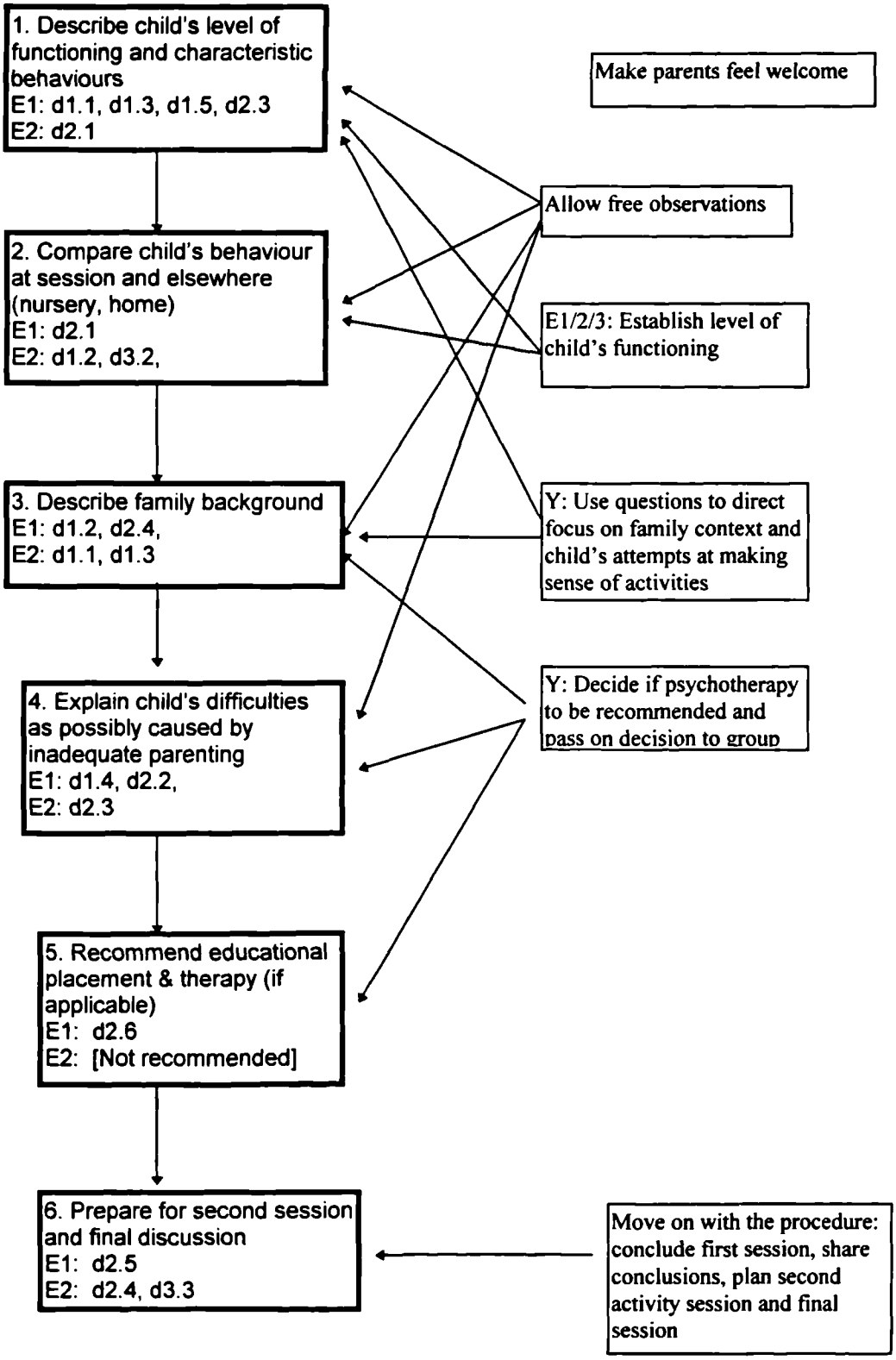


FigureIV.2.1E
A common sequential main goal schema in CYCLE 1 of E1 & E2



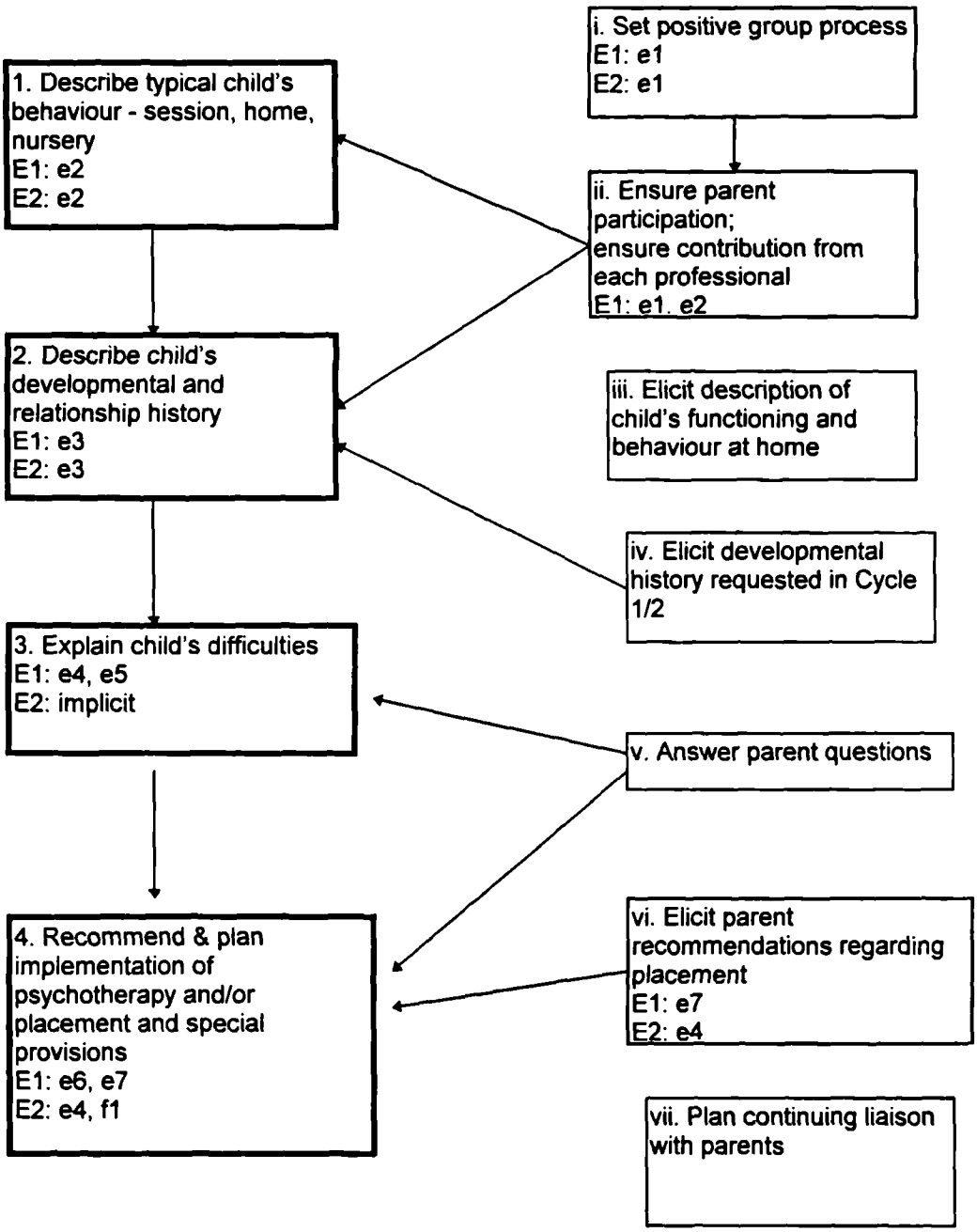
FigureIV.2.2E

A common sequential main goal schema in CYCLE 2 of E1 & E2



FigureIV.2.3E

A common sequential main goal schema in CYCLE 3 of E1 & E2



IV.3. Comparisons between the main goals of each case, with subgoals attached

Figure IV.3.1Ma

Comparative patterns in main goal sequence in cycle 1 of M1 & M2

(Prot.a: Referral meeting; Prot.b: Parent interview; Prot.c: Meeting to plan assessment activities)

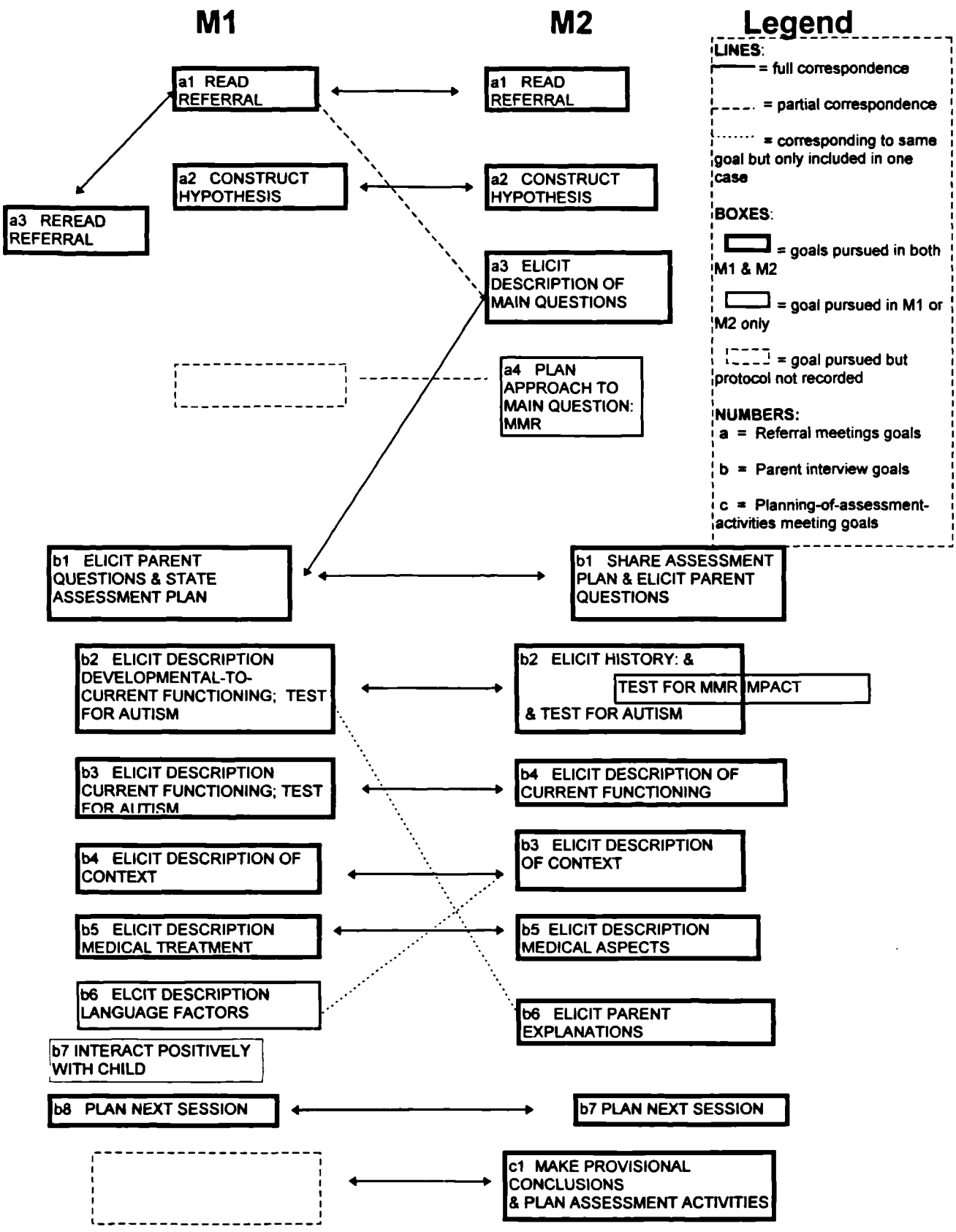
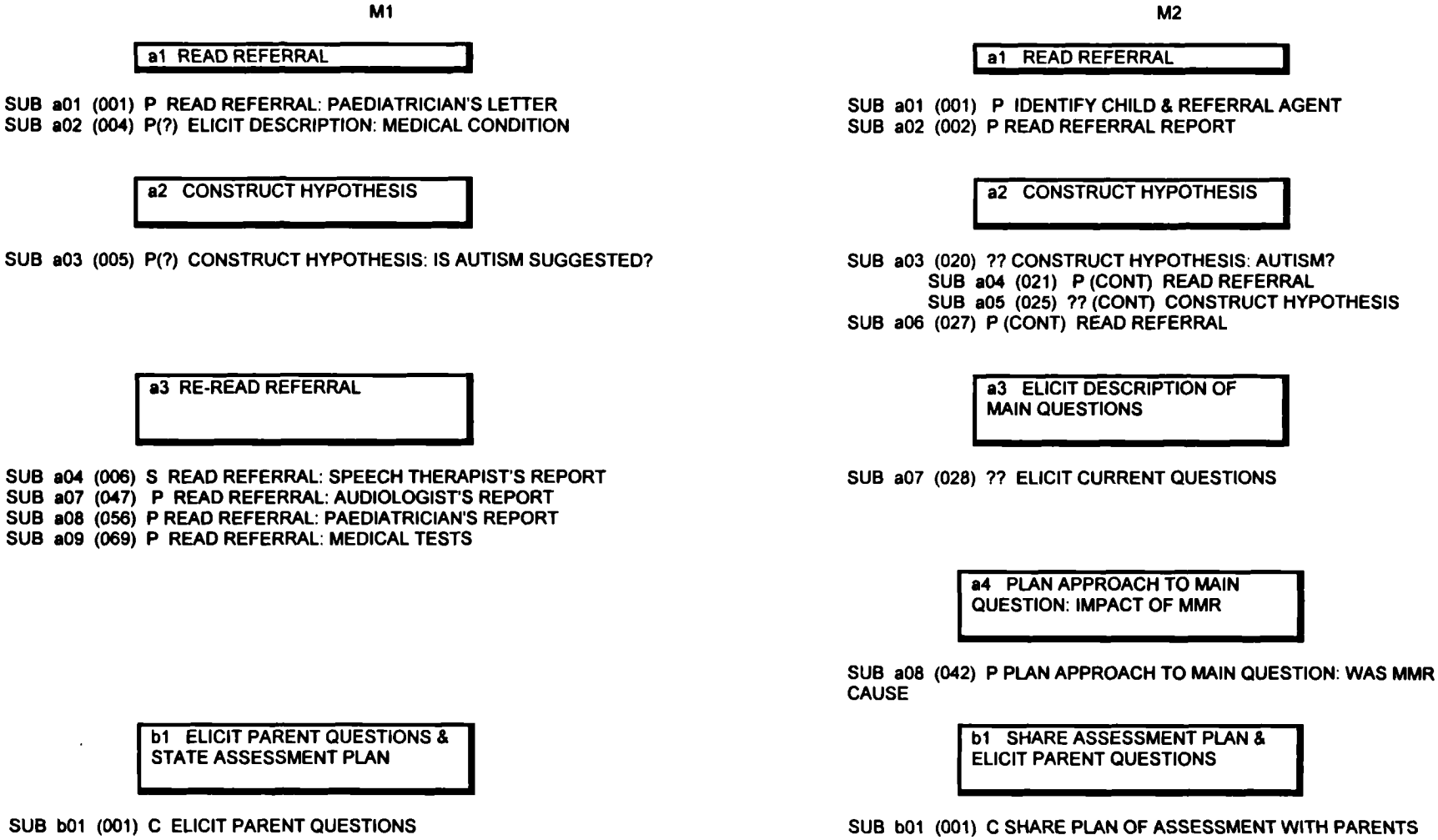


Figure IV.3.1Mb
Sequential structure of main goals and subgoals of Cycle 1 in M1 and M2



SUB b02 (038) C EMPATHISE WITH PARENTS
SUB b03 (040) C SHARE ASSESSMENT PLAN
SUB b04 (050) F STATE OTHER QUESTION: PARENTS COUSINS

b2 ELICIT DESCRIPTION DEVELOPMENTAL-TO-CURRENT FUNCTIONING; TEST FOR AUTISM

SUB b05 (056) P ELICIT DESCRIPTION: DEVELOPMENTAL HISTORY
SUB b06 (071) P ELICIT DEVELOPMENT OF COMMUNICATION: TEST FOR AUTISM
SUB b07 (090) P ELICIT DESCRIPTION: CURRENT FUNCTIONING COMMUNICATION
SUB b08 (095) P TEST FOR AUTISM: DEVELOPMENT OF POINTING
SUB b08b (098) P ELICIT DESCRIPTION CURRENT FUNCTIONING
SUB b09 (107) C RE-TEST FOR AUTISM: JOINT ATTENTION
SUB b09b (128) C ELICIT DESCRIPTION DEVELOPMENT: VOCAL INTERACTION
SUB b10 (108) C DESCRIBE: INTERACT WITH CHILD
SUB b11 (132) P TEST FOR AUTISM: ANY REGRESSION
SUB b12 (137) P ELICIT DESCRIPTION DEVELOPMENT: MOTOR MILESTONES

b3 ELICIT DESCRIPTION CURRENT FUNCTIONING; TEST FOR AUTISM

SUB b13 (141) P ELICIT DESCRIPTION CURRENT FUNCTIONING
SUB b14 (162) P RE-ELICIT DESCRIPTION: COMMUNICATION
SUB b15 (185) P ELICIT DESCRIPTION: SELF HELP SKILLS
SUB b16 (197) P ELICIT DESCRIPTION: SOCIAL INTERACTION
SUB b17 (199) F STATE OTHER QUESTION: DESCRIBE ROCKING
SUB b18 (207) P ELICIT DESCRIPTION: PLAY ACTIVITIES
SUB b19 (216) P RETEST FOR AUTISM: POINTING
SUB b19b (226) M DESCRIBE: CHILD CLAPS - COPYING?
SUB b20 (231) P ELICIT DESCRIPTION: MEDICAL CONDITION
SUB b21 (233) P ELICIT DESCRIPTION: HEARING
SUB b22 (238) P ELICIT DESCRIPTION: VISION

b4 ELICIT DESCRIPTION OF CONTEXT

SUB b02 (012) C ELICIT PARENT QUESTIONS

b2 ELICIT HISTORY: & TEST FOR MMR IMPACT & TEST FOR AUTISM

SUB b03 (031) C ELICIT DESCRIPTION PRE-MMR HISTORY
SUB b04 (035) P ELICIT DESCRIPTION OF EARLY HISTORY
SUB b04b (059) P ELCIT DESCRIPTION OF LANGUAGE DEVELOPMENT
SUB b04c (078) P ELICIT DESCRIPTION MOTOR DEVELOPMENT HISTORY
SUB b05 (082b) F STATE OTHER QUESTION: CHILD ROCKS
SUB b06 (090) P (CONT) ELICIT PRE-MMR HISTORY
SUB b07 (094) C ELICIT DESCRIPTION OF PAST/CURRENT COMMUNICATION
SUB b08 (123) P ELICIT DESCRIPTION OF MMR INCIDENT
SUB b09 (155b) P ELICIT DESCRIPTION OF FITS
SUB b10 (177) P ELICIT DESCRIPTION OF POST-MMR HISTORY
SUB b11 (187) C ELICIT DESCRIPTION OF LOCAL INPUT

b3 ELICIT DESCRIPTION OF CURRENT FUNCTIONING

SUB b12 (195) P ELICIT DESCRIPTION OF CURRENT COMMUNICATION
SUB b13 (121) P ELICIT DESCRIPTION OF CURRENT SELF HELP SKILLS
SUB b14 (231) P ELICIT DESCRIPTION OF CURRENT PLAY
SUB b15 (255) P ELICIT DESCRIPTION OF STEREOTYPIC PLAY
SUB b16 (268) C ELICIT DESCRIPTION OF CURRENT SOCIAL INTERACTION
SUB b17 (274) P ELICIT DESCRIPTION OF CURRENT MOTOR SKILLS

b4 ELICIT DESCRIPTION OF CONTEXT

SUB b23 (248) P ELICIT DESCRIPTION: FAMILY CONTEXT
SUB b24 (260) P ELICIT DESCRIPTION: SUPPORT SERVICES
SUB b25 (271) P ELICIT DESCRIPTION: SOCIAL INTERACTION
SUB b26 (278) P RE-ELICIT DESCRIPTION: SUPPORT SERVICES

b5 ELICIT DESCRIPTION MEDICAL TREATMENT

SUB b27 (282b) P ELICIT DESCRIPTION: INVESTIGATIONS UNDERTAKEN
SUB b28 (300) P ELICIT DESCRIPTION: CURRENT MEDICAL TREATMENT
SUB b29 (302) F RECOMMEND: ALTERNATIVE TREATMENT
SUB b30 (308) P RE-ELICIT DESCRIPTION: HOSPITALISATIONS

b6 ELCIT DESCRIPTION LANGUAGE FACTORS

SUB b31 (314) S ELICIT DESCRIPTION: ORAL-MOTOR FUNCTIONING
SUB b32 (322) S ELICIT DESCRIPTION: LANGUAGE BACKGROUND

b7 RELATE TO CHILD

:
SUB b32b (348) C INTERACT POSITIVELY WITH CHILD

b8 PLAN NEXT SESSION

SUB b33 (352) C PLAN: SHARE PLAN FOR NEXT SESSION WITH PARENTS

SUB b18 (278) P ELICIT DESCRIPTION OF SIB'S DEVELOPMENT
SUB b19 (286) F EXPLAIN DELAY BECAUSE OF OVERPOWERING SIB
SUB b20 (288) P RE-ELICIT DESCRIPTION OF INTERACTION WITH PEERS
SUB b21 (291) P RE-ELICIT DESCRIPTION OF LOCAL INPUT

b5 ELICIT DESCRIPTION MEDICAL ASPECTS

SUB b22 (295) P ELICIT DESCRIPTION MEDICAL INTERVENTION
SUB b23 (297) P ELICIT DESCRIPTION OF FAMILY MEDICAL BACKGROUND

b6 ELICIT PARENT EXPLANATIONS

SUB b24 (301) S ELICIT CURRENT EXPLANATION FROM PARENTS
SUB b25 (304) M DESCRIBE CONCERN RE SCREAMING

b7 PLAN NEXT SESSION

SUB b26 (306) C SHARE PLAN OF ASSESSMENT WITH PARENTS

c1 MAKE PROVISIONAL CONCLUSIONS & PLAN ASSESSMENT ACTIVITIES

SUB c01 (001) S DESCRIBE: LOCAL SERVICES INADEQUATE
SUB c02 (006c) C EXCPLAIN: CHILD SIGNIFICANTLY DELAYED
SUB c03 (015) C PLAN ASSESSMENT ACTIVITIES

Figure IV.3.2Ma
Comparative patterns in M1 & M2: by main goals in cycle 2
(Prot.d: Professionals-only evaluation meeting)

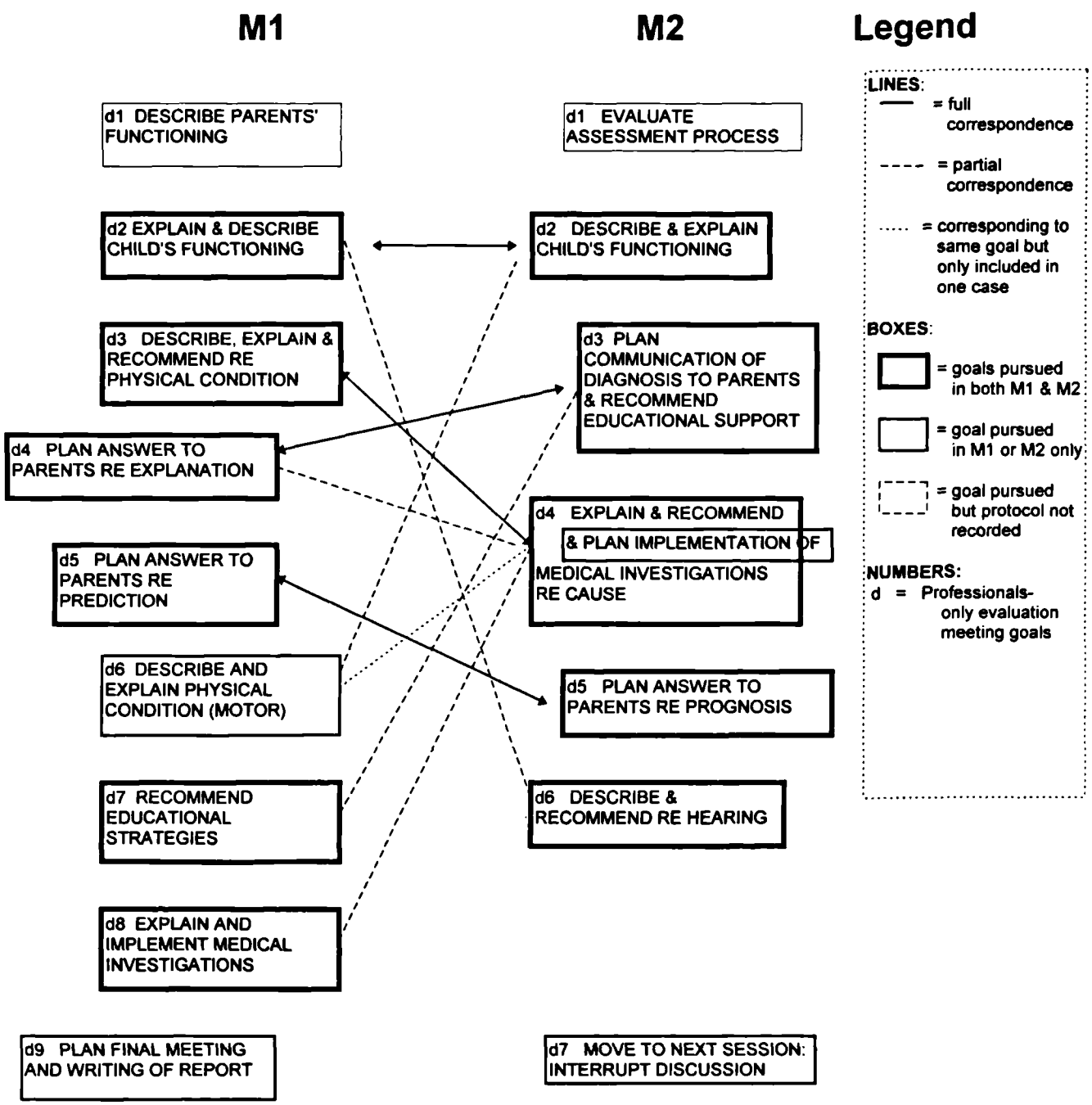
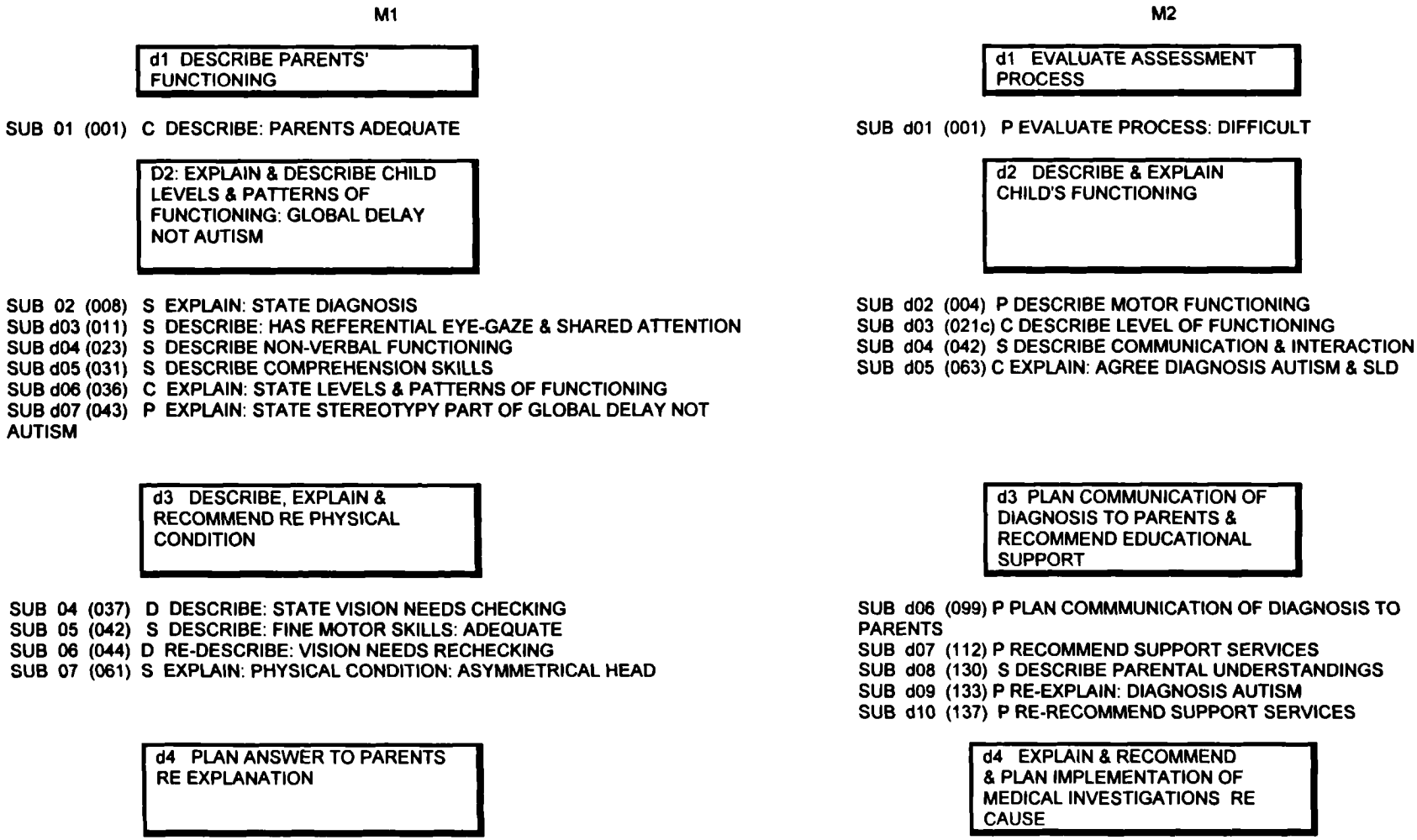


Figure IV.3.2Mb
Main and subgoal structure of Cycle 2 in M1 and M2



SUB 08 (069) S RECOMMEND: WHAT OTHER INFORMATION REQUIRED
SUB 09 (070) C RECOMMEND: ARRANGE FOR GENETIC COUNSELLING
SUB 10 (072) C EXPLAIN: DECIDE DIAGNOSIS TO GIVE PARENTS
SUB 11 (078) C RECOMMEND: ALL POSSIBLE INVESTIGATIONS EXCLUDED?
SUB 12 (083) S EXPLAIN: WHAT TO TELL PARENTS RE BEING FIRST COUSINS

d5 PLAN ANSWER TO PARENTS RE PREDICTION

SUB 13 (089) C PREDICT: IS SHE GOING TO TALK?

d6 DESCRIBE AND EXPLAIN PHYSICAL CONDITION (MOTOR)

SUB 14 (098) S DESCRIBE & EXPLAIN: ORAL-MOTOR, WALKING

d7 RECOMMEND EDUCATIONAL STRATEGIES

SUB 15 (115) S DESCRIBE & PREDICT: EDUCATIONAL STRATEGIES

d8 EXPLAIN AND IMPLEMENT MEDICAL INVESTIGATIONS

SUB 16 (127) S EXPLAIN: IS ANTIBIOTICS A CAUSE?

d9 PLAN FINAL MEETING AND WRITING OF REPORT

SUB 17 (135) C PLAN FINAL DISCUSSION PROCEDURE FOR PARENTS
SUB 18 (141) S PLAN (also SUMmary of case) WRITING OF REPORT
CON 19 (157) C STATE CONSTRAINT: TIME PRESSURE

SUB d11 (152) S RECOMMEND MEDICAL INVESTIGATIONS
SUB d12 (174) C RECOMMEND: PARENT MAY MEET CONSULTANT NEUROLOGIST
SUB d13 (179) S PLAN IMPLEMENTATION OF MEDICAL INVESTIGATIONS

d5 PLAN ANSWER TO PARENTS RE PROGNOSIS

SUB d14 (186) S RE-CALL PARENT QUESTIONS
SUB d15 (193) S PLAN COMMUNICATION OF PROGNOSIS

d6 DESCRIBE & RECOMMEND RE HEARING

SUB d16 (197c) P DESCRIBE & RECOMMEND RE CHILD'S HEARING

d7 MOVE TO NEXT SESSION: INTERRUPT DISCUSSION

SUB d17 (202) C CLOSE DISCUSSION

Figure IV.3.3Ma
Comparative patterns in M1 & M2: by main goals in cycle 3
(Prot.e: Concluding parent conference; Prot.f: Professionals-only planning follow-up to parent reactions)

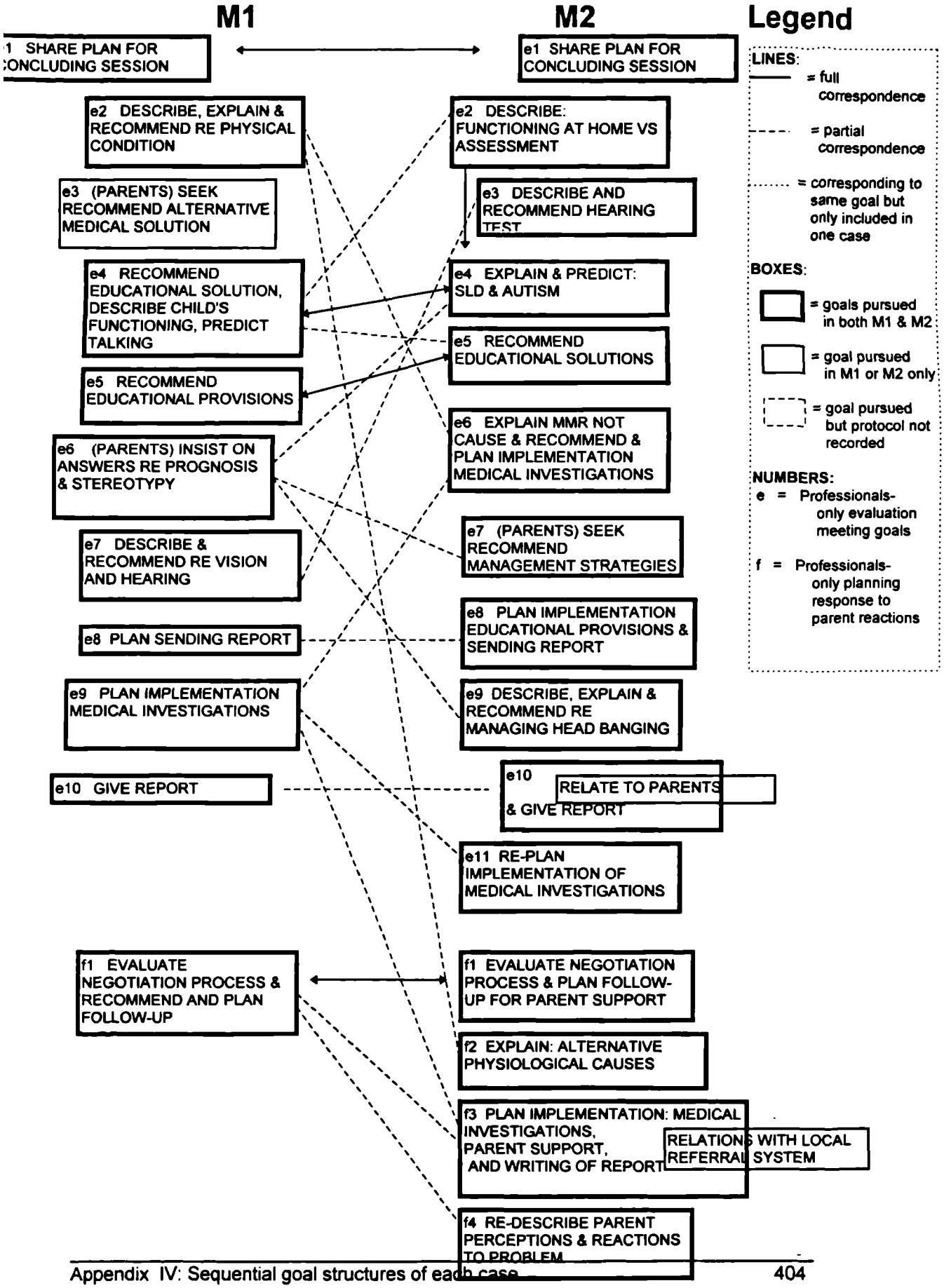
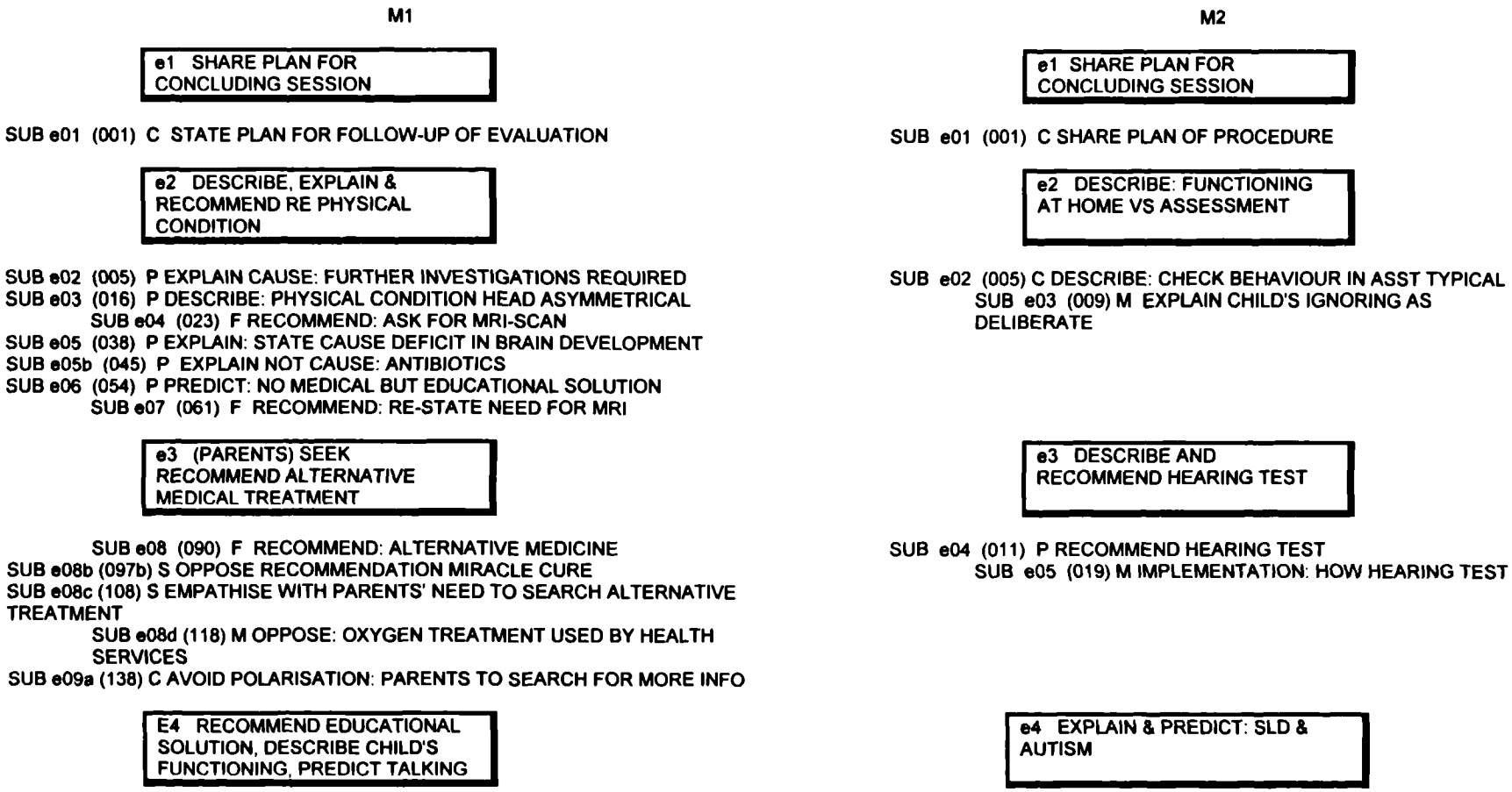


Figure IV.3.3Mb
Main and subgoal structure of Cycle 3 in M1 and M2



NURSERY & MAKATON
SUB e10b (166) S ELICIT PARENT PERSPECTIVE ON LEVEL OF FUNCTIONING
SUB e10c (176) S DESCRIBE CHILD'S LEVEL OF FUNCTIONING
SUB e10d (181) S PREDICT CHILD WILL PROGRESS SLOWLY - WILL SPEAK

e5 RECOMMEND EDUCATIONAL PROVISIONS

SUB e11 (193) F RECOMMEND: STATE SEARCH FOR NEW STRATEGIES
SUB e12 (203) C SOLUTION STRATEGY: OPPORTUNISTIC TEACHING
SUB e13 (210) C RE-RECOMMEND STRATEGY: OPPORTUNISTIC TEACHING BY STAFF
SUB e14 (215) S RE-RECOMMEND STRATEGY: MAKATON AT HOME

e6 (PARENTS) INSIST ON ANSWERS RE PROGNOSIS & STEREOTYPY

SUB e15 (218) F PREDICT: SEARCH FOR PROGNOSIS
SUB e16 (271) F EXPLAIN: SEARCH EXPLANATION FOR ROCKING

EMERGING
SUB e08 (050) C DESCRIBE LEVEL OF COMMUNICATION BEHIND VISUAL SKILLS
SUB e09 (061) C DESCRIBE: NEGOTIATE WITH PARENTS LEVEL OF COMMUNICATION <1 YR
SUB e10 (073) C EXPLAIN: DIFFICULTIES ARE LOW MENTAL AGE & AUTISM
SUB e11 (082) M OPPOSE EXPLANATION AS AUTISM
SUB e12 (091) C REASSURE PARENTAL ADEQUACY
SUB e13 (096) C EXPLAIN: AUTISM A RAG BAG TERM
SUB e14 (101) S FOCUS ON REMEDIATION
SUB e15 (102) C RE-EXPLAIN: PATTERN WITHIN AUTISTIC SPECTRUM
SUB e16 (105) M PREDICT: ASK IF WILL CATCH UP
SUB e17 (114) S RECOMMEND REVIEW OF PREDICTION WITHIN A YEAR

e5 RECOMMEND EDUCATIONAL STRATEGIES AND PROVISIONS

SUB e18 (118) S RECOMMEND SUPPORT FOR COMMUINICATION DEVELOPMENT
SUB e19 (123) S ELICIT SUPPORT SERVICES USED BY PARENTS
SUB e20 (135) S RECOMMEND SPEECH THERAPY & STRATEGIES
SUB e21 (151) C RECOMMEND SMALL GROUP NURSERY

e6 EXPLAIN MMR NOT CAUSE & RECOMMEND MEDICAL INVESTIGATIONS

SUB e22 (155) P EXPLAIN: MMR PROBABLY NOT CAUSE
SUB e23 (162) M OPPOSE EXPLANATION OF NON-REMEDIABLE AUTISM
SUB e24 (180) M RECOMMEND SEARCH FOR MEDICAL CAUSE
SUB e25 (197) M IMPLEMENTATION: ASK FOR EXPLANATION OF TESTS
SUB e26 (217) P RECOMMEND SCAN
SUB e27 (225) F IMPLEMENTATION: CHECK NO SIDE EFFECTS
SUB e28 (230) P RECOMMEND: TESTS PROBABLY NEGATIVE
SUB e29 (240) P RECOMMEND: MRI SCAN
SUB e30 (246) P IMPLEMENT: MEDICAL INVESTIGATIONS
SUB e31 (262) S EXPLAIN: BIRTH & MMR NOT CAUSE
SUB e32 (272) M RE-OPPOSE EXPLANATION THAT MMR

e7 DESCRIBE & RECOMMEND RE VISION AND HEARING

SUB e17 (306) P DESCRIBE: VISION AND HEARING
SUB e18 (315) P RECOMMEND: VISION NEEDS RETESTING

e8 PLAN SENDING OF REPORT

SUB e19 (326) S REFERRAL: CHECK IF ANY UNANSWERED QUESTIONS
SUB e20 (331) P PLAN IMPLEMENTATION: TO WHOM TO SEND REPORT

e9 PLAN FOR IMPLEMENTATION MEDICAL INVESTIGATIONS

SUB e21 (341) F PLAN IMPLEMENTATION: WHAT HOSPITAL ARRANGEMENTS
SUB e22 (347) P PLAN IMPLEMENTATION: GENETIC COUNSELLING

NOT CAUSE
SUB e33 (282) P RECOMMEND REVIEW BY CONSULTANT NEUROLOGIST RE MMR

e7 (PARENTS) SEEK RECOMMEND MANAGEMENT STRATEGIES

SUB e34 (292) M RECOMMEND: WHAT TO DO IMMEDIATELY
SUB e35 (297) F RECOMMEND: STRATEGIES FOR DAILY MANAGEMENT
SUB e36 (318) F RECOMMEND: WAYS OF MANAGING CHILD'S LOVE OF VIDEOS

e8 PLAN IMPLEMENT EDUCATIONAL PROVISIONS

SUB e37 (330) S IMPLEMENT: LOCAL SUPPORT SERVICES
SUB e38 (341) M IMPLEMENT: IMMEDIATE PARENTAL USE OF SERVICES
SUB e39 (353) C IMPLEMENT: REVIEW IN A YEAR'S TIME
SUB e40 (362b) M PREDICT: PROGRESS UP TO NEXT REVIEW

e9 PLAN SENDING OF REPORT

SUB e41 (370) P PLAN: SENDING OF REPORT

e10 DESCRIBE, EXPLAIN & RECOMMEND RE MANAGING HEAD BANGING

SUB e42 (376) P ELICIT PARENTAL QUESTIONS: ALLOW OPEN DOOR
SUB e43 (381) M DESCRIBE: HEAD BANGING

e11 RELATE TO PARENTS & GIVE REPORT

SUB e44 (403) S RELATE PERSONALLY TO PARENTS

GOAL f1 EVALUATE NEGOTIATION PROCESS & RECOMMEND AND PLAN FOLLOW-UP

SUB fO1 (001) C EVALUATE PROCESS: UNCOMFORTABLE
SUB f02 (003) C DESCRIBE PARENTS' UNDERSTANDING OF PROGNOSTIC FORMULATION
SUB f03 (038) C RECOMMEND FOLLOW UP WITH LOCAL SERVICES

e12 RE-PLAN IMPLEMENTATION OF MEDICAL INVESTIGATIONS

SUB e45 (416) M IMPLEMENT: CONFIRM APPOINTMENT IN 6 MONTHS
SUB e46 (419) M RECOMMEND: CLARIFY USE OF EEG
SUB e47 (424) P RECOMMEND: NEED FOR HEARING TEST
SUB e48 (431) M CONCLUDE

f1 EVALAUTE NETOTIATION PROCESS & PLAN FOLLOW-UP FOR PARENT SUPPORT

SUB f01 (001) C PLAN SUPPORT FOR PARENTS
SUB f02 (002) S DESCRIBE & PREDICT & RECOMMEND RE PARENT REACTIONS TO DIAGNOSIS
SUB f03 (023) S PLAN CONTACTING LOCAL PAEDIATRICIAN
SUB f04 (028) C PLAN THREE RECOMMENDATIONS
SUB f05 (031) P PLAN MEDICAL INVESTIGATIONS

f2 EXPLAIN: ALTERNATIVE PHYSIOLOGICAL CAUSES

SUB f06 (038) C EXPLAIN: CONSIDER ALTERNATIVE PHYSIOLOGICAL EXPLANATIONS

F3 PLAN IMPLEMENTATION: MEDICAL, PARENT SUPPORT, CHANGE LOCAL REFERRAL SYSTEM, AND WRITING OF REPORT

SUB f07 (055) P PLAN IMPLEMENTATION SUPPORT FROM LOCAL SERVICES
SUB f08 (061) S PLAN MEDICAL INVESTIGATIONS
SUB f09 (067) S PLAN WRITING OF REPORT
SUB f10 (077) S PLAN CONTACTING LOCAL PAEDIATRICIAN RE EDUCATIONAL PROVISIONS
SUB f11 (081) C PLAN INTERVENTION WITH LOCAL SERVICES REFERRAL SYSTEM
SUB f12 (089) S PLAN WRITING REST OF REPORT

f4 RE-DESCRIBE PARENT PERCEPTIONS & REACTIONS TO PROBLEM

SUB f13 (093) P EVALUATE BEST WAY TO COMMUNICATE DIAGNOSIS
SUB f14 (117) S DESCRIBE PARENTS' POSITION RE ACCEPTANCE OF CHILD'S PROBLEM

Figure IV.3.1Ea
Comparative patterns in E1 & E2: by main goals in cycle 1
(Prot.a: Referral meeting; Prot. c: Meeting to plan assessment activities)

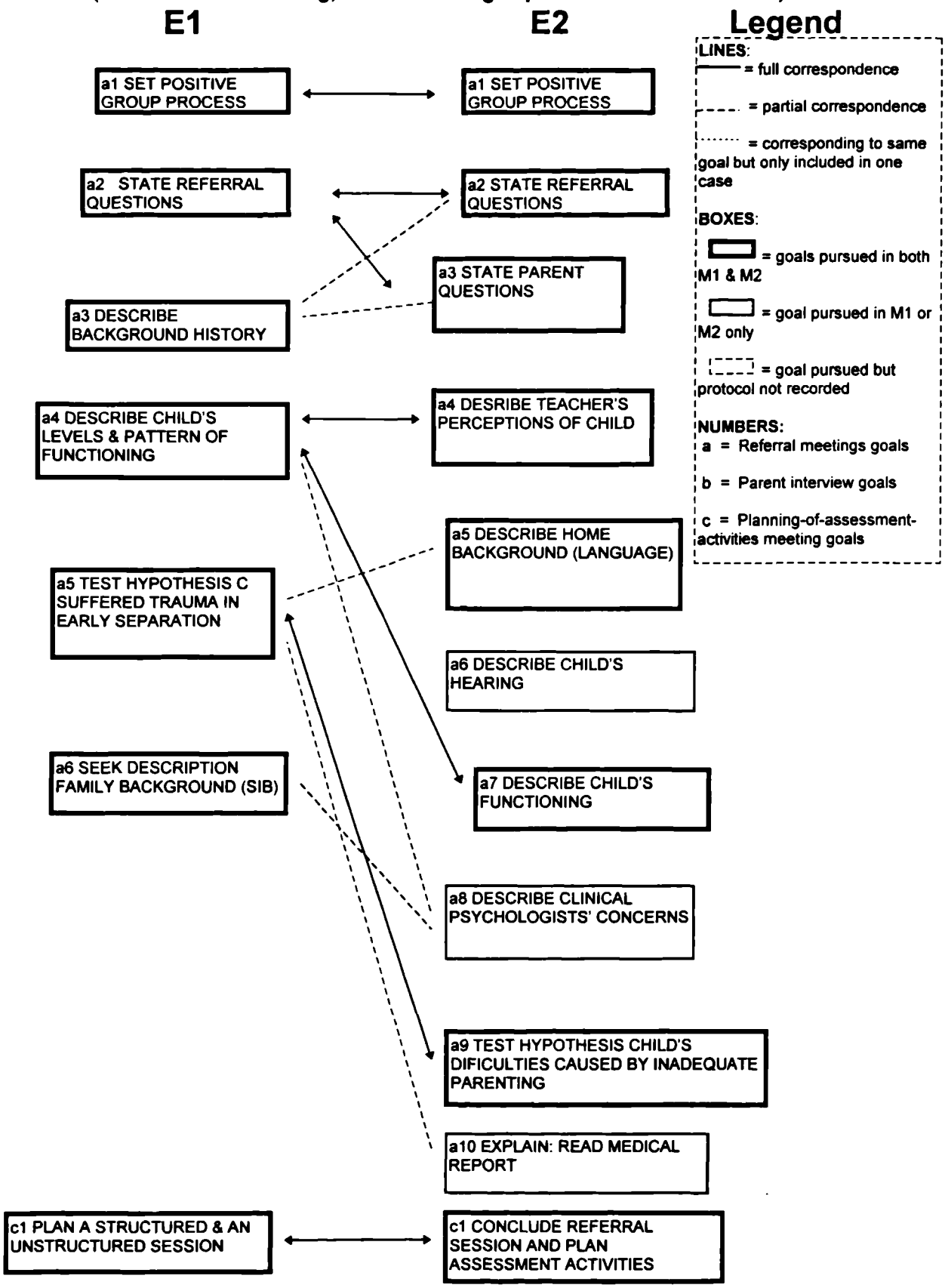
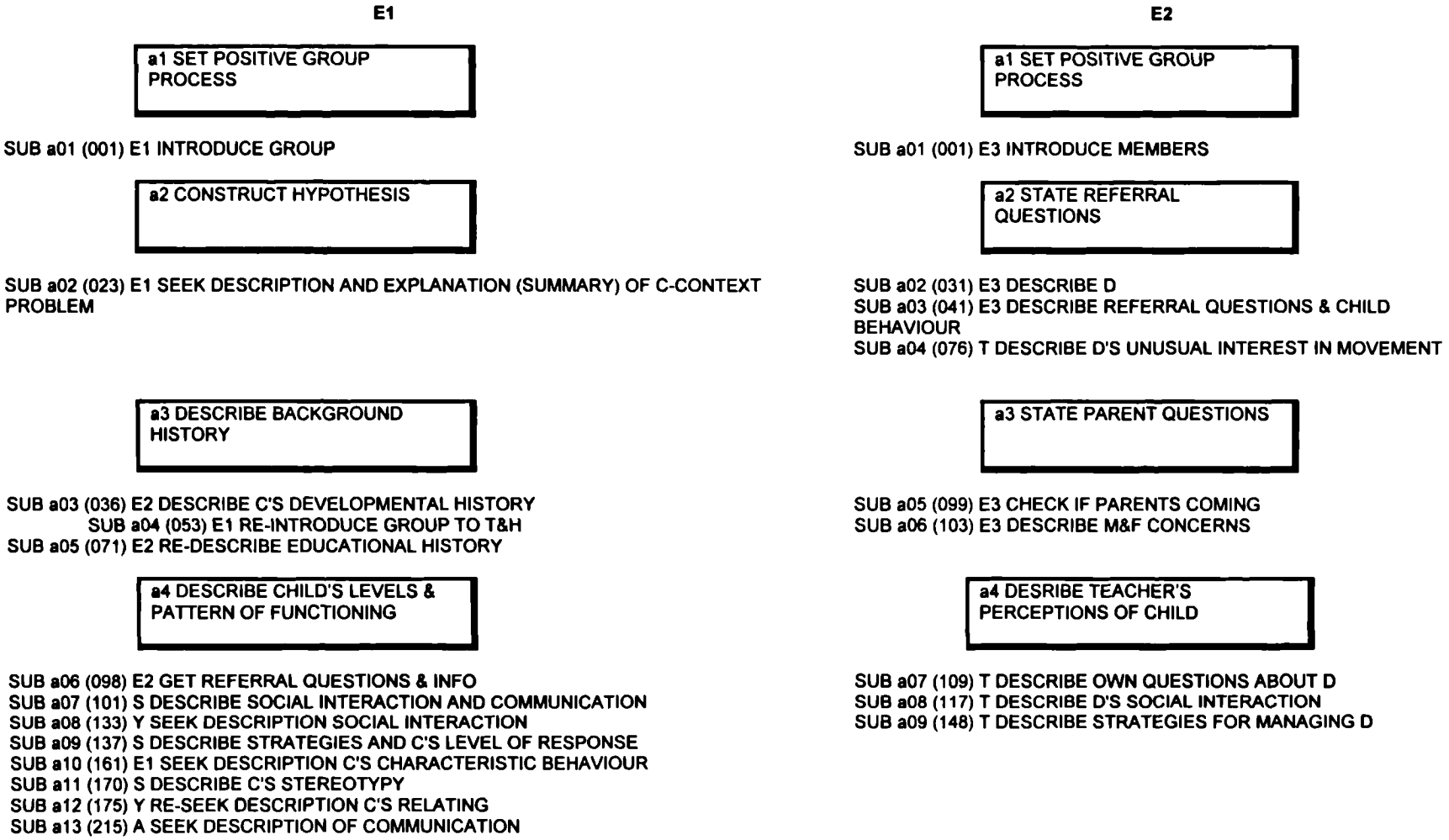


Figure IV.3.1Eb
Main and subgoal structure of Cycle 1 in E1 and E2



SUB a14 (224) E1 SEEK DESCRIPTION LEVEL OF FUNCTIONING

a05 TEST HYPOTHESIS C SUFFERED TRAUMA IN EARLY SEPARATION

SUB a15 (261) Y RE-SEEK DESCRIPTION C'S RELATIONSHIPS ~
SUB a16 (283) A SEEK DESCRIPTION C's FUNCTIONING
SUB a17 (288) S RE-DESCRIBE C'S RELATIONSHIPS

a06 SEEK DESCRIPTION FAMILY BACKGROUND

SUB 18 (302) E1 SEEK DESCRIPTION FAMILY BACKGROUND

c01 PLAN A STRUCTURED & AN UNSTRUCTURED SESSION

SUB c01 (001) E2 PLAN FOR DIFFERENT PEOPLE & ACTIVITIES
SUB c02 (019) Y INCLUDE PARENTS IN FIRST SESSION
SUB c03 (029) Y PLAN UNSTRUCTURED SESSION FIRST
SUB c04 (047) E2 PLAN STRUCTURED SECOND SESSION
SUB c05 (052) E2 RE-PLAN FIRST SESSION

a5 DESCRIBE HOME BACKGROUND (LANGUAGE)

SUB a10 (164) E3 DESCRIBE LANGUAGE OF HOME

a6 DESCRIBE CHILD'S HEARING

SUB a11 (177) E4 SEEK DESCRIPTION OF HEARING

a7 DESCRIBE CHILD'S FUNCTIONING

SUB a12 (185) E4 SEEK DESCRIPTION OF SELF HELP (TOILETING)
SUB a13 (200) E3 DESCRIBE NON-RESPONSE TO BOOKS
SUB a14 (222) Y SEEK DESCRIPTION D'S FREE ACTIVITY
SUB a15 (236) E3 PLAN REST OF MORNING

a8 DESCRIBE CLINICAL PSYCHOLOGIST'S CONCERNS

SUB a16 (245) E1 SEEK DESCRIPTION BY PSYCHOLOGIST
SUB a17 (249) C2 DESCRIBE WIDER FAMILY CONCERNS & BACKGROUND

a9 TEST HYPOTHESIS CHILD'S DIFICULTIES CAUSED BY INADEQUATE PARENTING

SUB a18 (260) Y EXPLAIN: SEEK DESCRIPTION OF RELATIONSHIP HISTORY AS POSSIBLE CAUSE
SUB a19 (266) C2 EXPLAIN CONTEXT: DELAY IN PROVIDING SUPPORT SERVICES TO CHILD

SUB a20 (279) Y EXPLAIN D'S DIFFICULTIES AS RESULT OF INADEQUATE PARENTING
SUB a21 (293) Y TEST HYPOTHESIS LACK OF BONDING AT BIRTH

a10 READ MEDICAL REPORT

SUB a22 (328) E3 READ MEDICAL REPORT
SUB a23 (339) T DESCRIBE D DIFFERENT WITH F BECAUSE VERY STRICT
SUB a24 (354) E1 SEEK READING OF MEDICAL DIAGNOSIS - AUTISM

c1 CONCLUDE REFERRAL SESSION AND PLAN ASSESSMENT ACTIVITIES

SUB a25 (364) E1 CONCLUDE REFERRAL DISCUSSION & PLAN NEXT SESSION
SUB a26 (366) E3 PLAN PARENT PARTICIPATION
SUB a27 (373) E1 PLAN INFORMAL SESSION
SUB a28 (401) E1 GET VOLUNTEERS FOR SESSION
SUB a29 (407) Y SEEK RECOMMENDATION FOR A SPEECH THERAPIST
SUB a30 (417) E1 MOVE TOWARDS START OF SESSION

Figure IV.3.2Ea
Comparative patterns in E1 & E2: by main goals in cycle 2
(Prot.d.1: Behind-screen first session observation comments; Prot.d.2: Professionals-only post-observation discussion; Prot.d.3: Behind-screen second session observation comments)

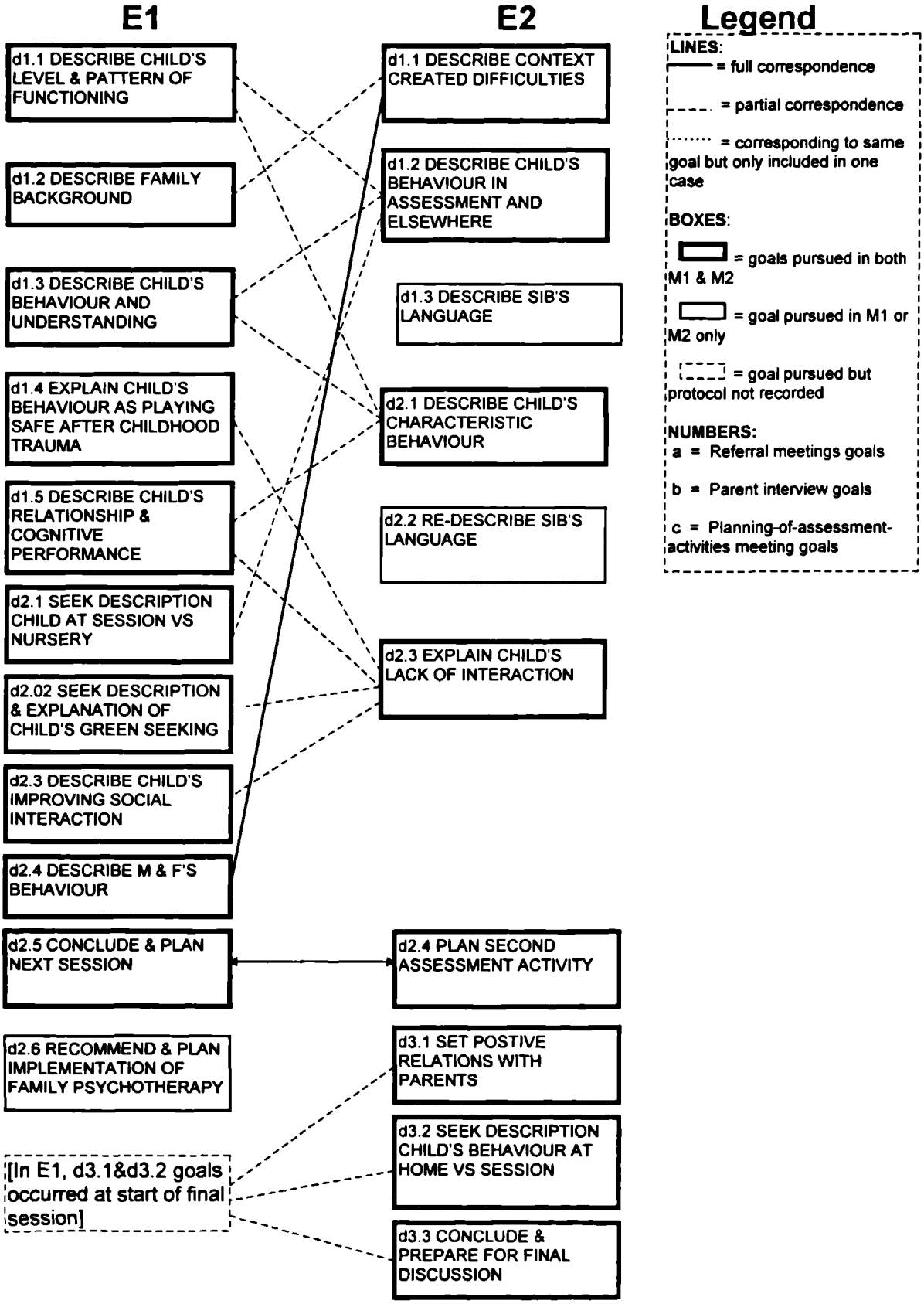
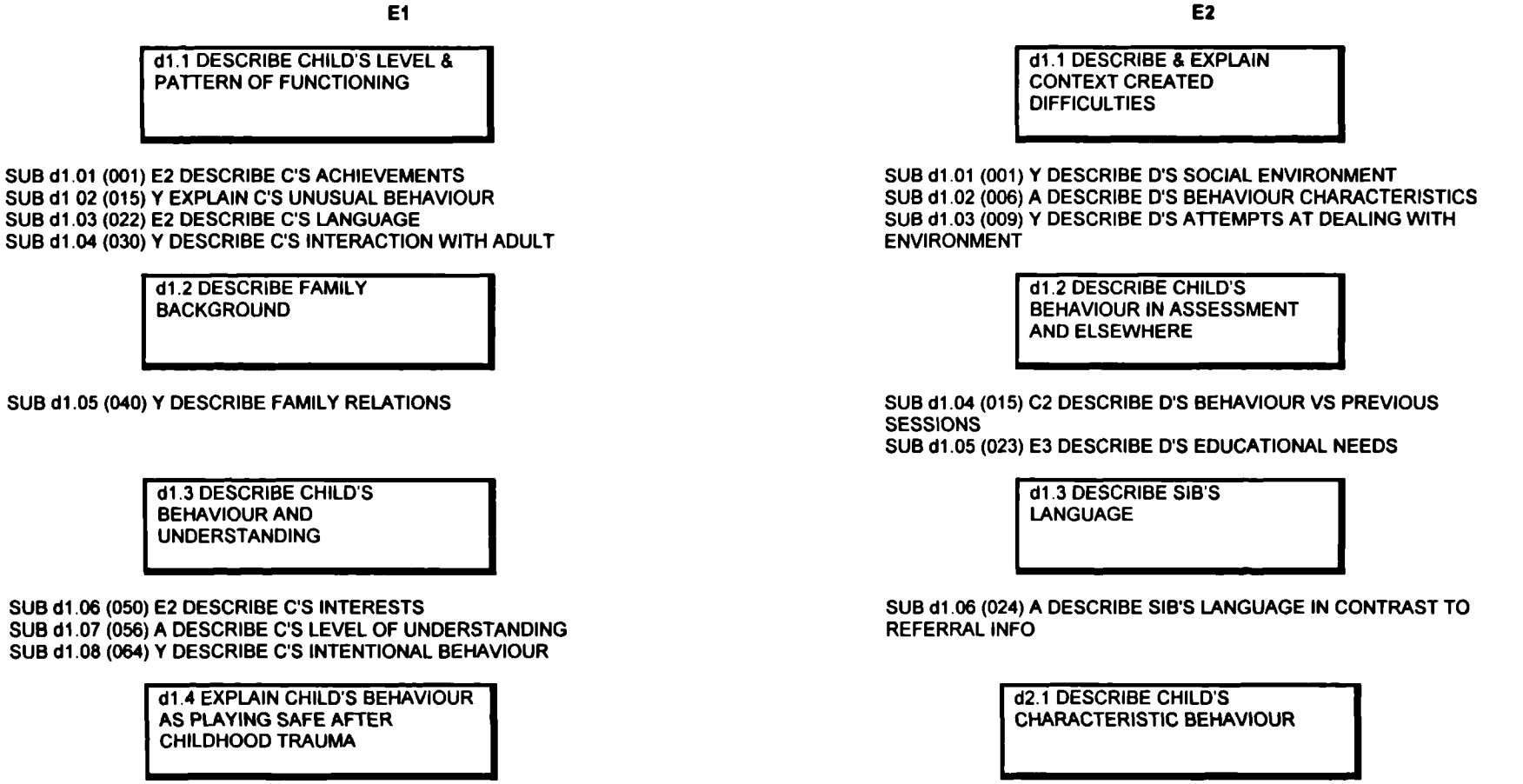


Figure IV.3.2Eb
Main and subgoal structure of Cycle 2 in E1 and E2



d1.5 DESCRIBE CHILD'S RELATIONSHIP & COGNITIVE PERFORMANCE

SUB d1.11 (100) E2 DESCRIBE C'S RELATIONS WITH M&F
SUB d1.12 (105) Y DESCRIBE C'S MEANINGFUL BEHAVIOUR
SUB d1.13 (108) E1 DESCRIBE C'S LEVEL OF UNDERSTANDING
SUB d1.14 (110) Y DESCRIBE C'S EMOTIONAL BEHAVIOUR
SUB d1.15 (128) E1 DESCRIBE C'S COGNITIVE LEVEL
SUB d1.16 (141) E1 DESCRIBE C'S INTENTIONAL BEHAVIOUR

d2.01 SEEK DESCRIPTION CHILD AT SESSION VS NURSERY

SUB d2.01 (001) E2 COMPARE BEHAVIOUR AT SESSION WITH BEHAVIOUR AT NURSERY

d 2 02 SEEK DESCRIPTION & EXPLANATION OF CHILD'S GREEN SEEKING

SUB d2.02 (022) Y DESCRIBE C'S INTEREST IN GREEN
SUB d2.03 (035) EXPLAIN C'S GREEN SEEKING
SUB d2.04 (071) A EXPLAIN CHILD STILL VERY ENCLOSED

d.2 03 DESCRIBE CHILD'S IMPROVING SOCIAL INTERACTION

TASKS
SUB d2.03 (059) T DESCRIBE D'S SOCIAL INTERACTION

d2.2 RE-DESCRIBE SIB'S LANGUAGE

SUB d2.04 (068) ?? DESCRIBE NOTHING WRONG WITH SIB'S LANGUAGE

d2.3 EXPLAIN CHILD'S LACK OF INTERACTION

SUB d2.05 (074) T DESCRIBE D'S SENSATION FUNCTIONING LEVELS
SUB d2.06 (077) Y DESCRIBE INADEQUATE INPUT FOR D
SUB d2.07 (093) E1 EXPLAIN INADEQUACY CAUSED BY D'S NON-RESPONSE
SUB d2.08 (128) C2 EXPLAIN LACK OF M'S INTERACTION AS CAUSED BY ANXIOUS SITAUTION
SUB d2.09 (135) Y EXPLAIN LACK OF INTERACTION AS DUE TO FAILURE TO DEVELOP IT EARLY
SUB d2.10 (158) Y HYPTHESISE D EXPERIENCED SEPARATION

d2.4 PLAN SECOND ASSESSMENT ACTIVITY

SUB d2.11 (204) E1 PLAN NEXT SESSION
SUB d2.12 (208) E3 PLAN INFORMAL ACTIVITY WITHOUT PARENTS
SUB d2.13 (229) E1 CALL FOR 2 VOLUNTEERS FOR SESSION
SUB d2.14 (238) E1 INFORM GROUP OF PLAN FOR FINAL DISCUSSION

d3.1 SET POSTIVE RELATIONS WITH PARENTS

SUB d2.05 (112) Y DESCRIBE C'S SOCIAL INTERACTION

d 2 04 DESCRIBE M & F'S BEHAVIOUR

SUB d2.06 (117) Y DESCRIBE HOME BACKGROUND

d 2 05 CONCLUDE & PLAN NEXT SESSION

SUB d2.07 (132) CONCLUDE SESSION AND PLAN NEXT

d 2 06 RECOMMEND & PLAN IMPLEMENTATION OF FAMILY PSYCHOTHERAPY

SUB d2.08 (147) RECOMMEND FAMILY PSYCHOTHERAPY
SUB d2.09 (151) E1 PLAN IMPLEMENTATION OF PSYCHOTHERAPY RECOMMENDATIONS

SUB d3.01 (001) E1 RELATE TO PARENTS

d3.2 SEEK DESCRIPTION CHILD'S BEHAVIOUR AT HOME VS SESSION

SUB d3.02 (005) E1 SEEK DESCRIPTION D'S BEHAVIOUR WITH PARENTS
SUB d3.03 (023) C2 SEEK DESCRIPTION D'S ACTIVE BEHAVIOUR AT SESSION AND AT HOME
SUB d3.04 (031) E1 DESCRIBE D'S UNUSUAL BEHAVIOUR
SUB d3.05 (036) C2 STATE CHANGE IN SESSION ARRANGEMENTS
SUB d3.06 (047) E1 DESCRIBE D'S NARROW INTERESTS
SUB d3.07 (053) Y SEEK DESCRIPTION OF D'S BEHAVIOUR AS MEANINGFUL

d3.3 CONCLUDE & PREPARE FOR FINAL DISCUSSION

SUB d3.08 (068) E1 CONCLUDE SESSION & PREPARE PARENTS FOR FINAL DISCUSSION

Figure IV.3.3Ea
Main goal structure of Cycle 3 in E1 and E2

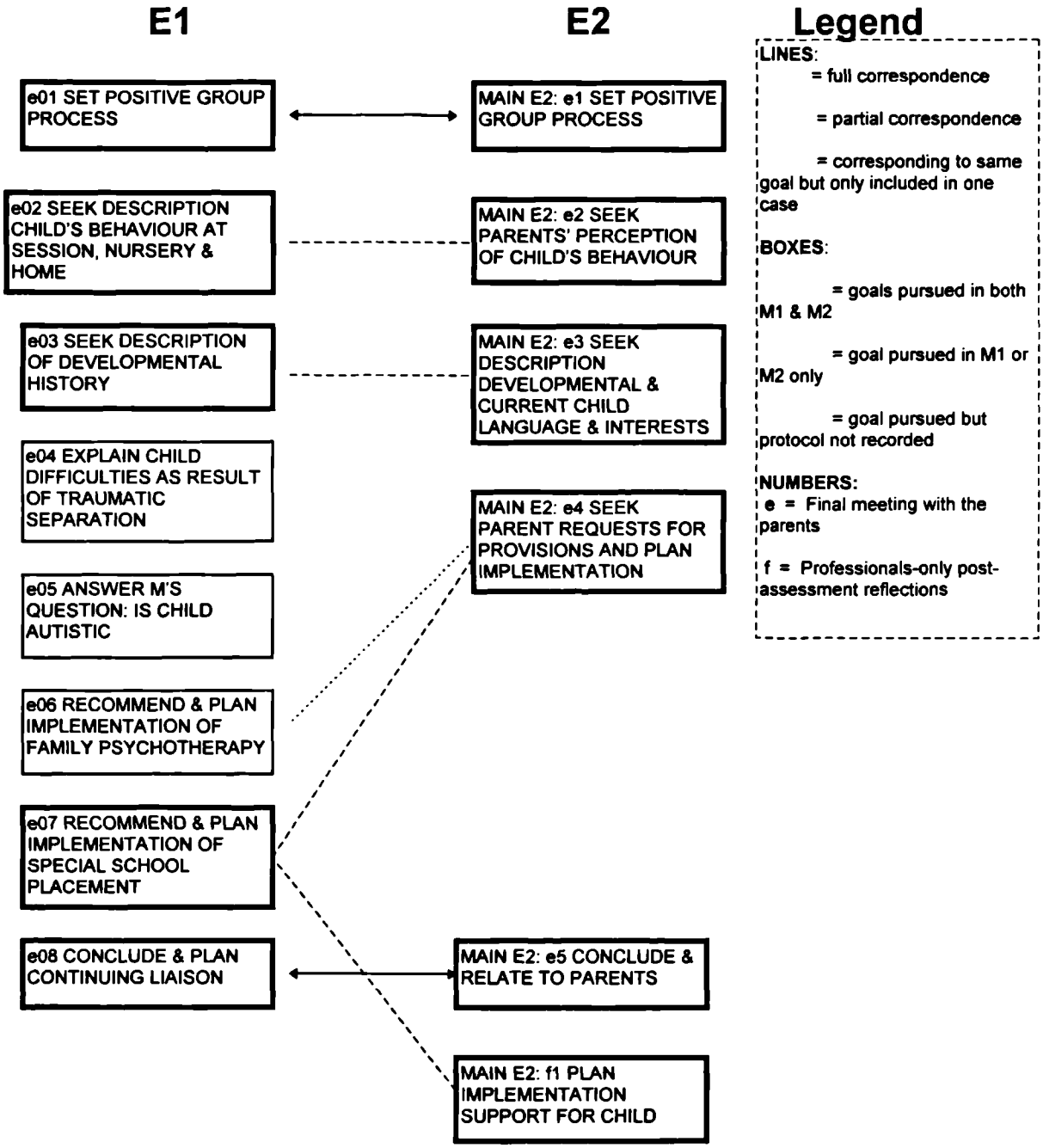
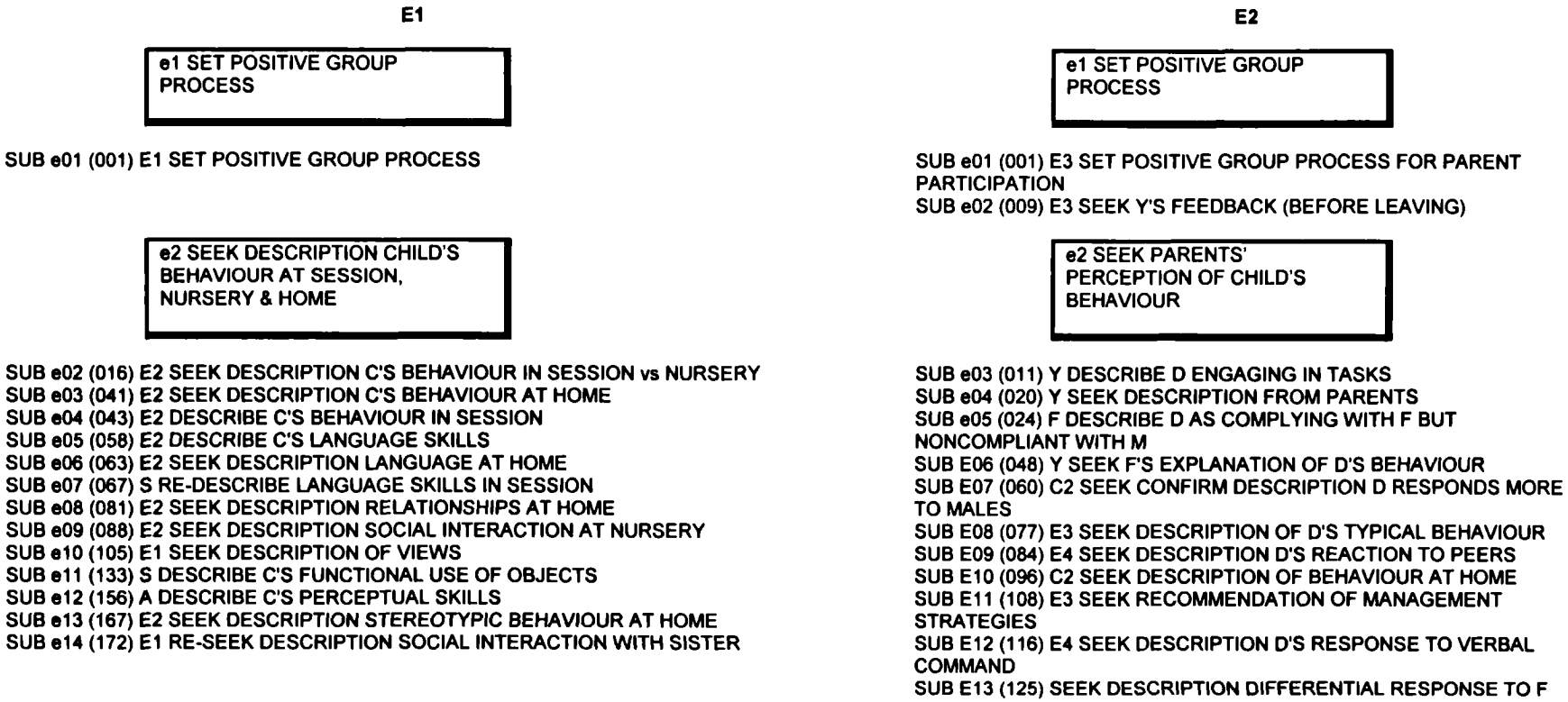


Figure IV.3.3Eb
Main and subgoal structure of Cycle 3 in E1 and E2



e3 SEEK DESCRIPTION OF DEVELOPMENTAL HISTORY

SUB e15 (194) E2 SEEK DESCRIPTION DEVELOPMENTAL HISTORY
SUB e16 (218) M DESCRIBE FIRST NOTICING OF PROBLEM
SUB e17 (229) M DESCRIBE C'S GETTING BACK TO NORMAL

e4 EXPLAIN CHILD DIFFICULTIES AS RESULT OF TRAUMATIC SEPARATION

SUB e18 (245) E1 EXPLAIN SEPARATION EVENT TRAUMATIC FOR C
SUB e19 (257) E1 DESCRIBE-CHECK DEVELOPMEMNTAL HISTORY PRE-SEPARATION

e3 TEST HYPOTHESIS CHILD HAS AUTISM: SEEK DESCRIPTION DEVELOPMENTAL & CURRENT CHILD LANGUAGE & INTERESTS

SUB E14 (143) C2 SEEK DESCRIPTION OF POSSIBLE SEPARATION IN INFANCY
SUB E15 (163) E3 SEEK DESCRIPTION OF EARLY & CURRENT LANGUAGE DEVEVLOPMENT
SUB E16 (184) C2 DESCRIBE OBSERVED VERBAL BEHAVIOUR OF D
SUB E17 (197) Y DESCRIBE SIB'S DIFFERENT EXPERIENCE OF ACTIVE BEHAVIOUR
SUB E18 (202) Y LEAVE THE DISCUSSION
SUB E19 (205) E3 SEEK DESCRIPTION OF POSSIBLE REGRESSION
SUB E20 (236) E4 SEEK DESCRIPTION OF FUNCTIONING AND INTERESTS
SUB E21 (242) E4 SEEK DESCRIPTION OF SOCIAL INTERACTION
SUB E22 (251) E3 RE-SEEK DESCRIPTION OF POSSIBLE REGRESSION
SUB e23 (269) C2 RE-SEEK LANGUAGE DEVELOPMENT PRE-18MTHS
SUB E24 (284) C2 SEEK DESCRIPTION SIB'S LANGUAGE
SUB E25 (291) E4 SEEK DESCRIPTION SOCIAL INTERACTION
SUB E26 (313) E3 SEEK DESCRIPTION D'S INTERESTS
SUB e27 (332) E3 SEEK DESCRIPTION UNUSUAL BEHAVIOURS

e4 SEEK PARENT RECOMMENDATIONS FOR PROVISIONS AND PLAN IMPLEMENTATION

SUB E28 (336) E4 BRING MEETING TO CONCLUSION
SUB E29 (339) E3 SEEK PARENT RECOMMENDATIONS FOR D'S EDUCATION
SUB E30 (352) E4 SEEK ANY FURTHER QUESTIONS FROM PARENTS
SUB E31 (354) F SEEK IMPLEMENTATION OF EDUCATIONAL PROVISIONS
SUB E32 (375) C2 SEEK RECOMMENDATIONS FOR SIB
SUB E33 (379) E3 INFORM PARENTS RE STATEMENTING PROCEDURE
SUB E34 (387) E3 RECOMMEND IMPLEMENTATION OF SPEECH THERAPY
SUB E35 (414) E3 RE-INFORM PARENTS RE STATEMENTING
SUB E36 (435) M SEEK QUICK IMPLEMENTATION OF PROVISIONS

e5 EXPLAIN: ANSWER M'S QUESTION: IS CHILD AUTISTIC

SUB e20 (273) E2 EXPLAIN: ANSWER M'S QUESTION IF C AUTISTIC

e6 RECOMMEND & PLAN IMPLEMENTATION OF FAMILY PSYCHOTHERAPY

SUB e21 (304) E1 RECOMMEND THERAPY SESSIONS FOR FAMILY
SUB e22 (317) E2 PLAN IMPLEMENTATION OF THERAPY

e7 RECOMMEND & PLAN IMPLEMENTATION OF SPECIAL SCHOOL PLACEMENT

SUB e23 (335) E2 ELICIT FURTHER QUESTIONS FROM M&F
SUB e24 (343) E1 RECOMMEND & PLAN IMPLEMENTATION OF PLACEMENT
SUB e25 (362) E1 SEEK DESCRIPTION OF RECOMMENDED SCHOOL FOR PARENTS
SUB e26 (434) E2 PLAN IMPLEMENTATION STATEMENTING
SUB e27 (440) E1 SEEK OCCUPATIONAL THERAPY RECOMMENDATION
SUB e28 (443) A RECOMMEND PROVISIONS TO INCLUDE SWIMMING

e8 CONCLUDE & PLAN CONTINUING LIAISON

SUB e29 (455) E2 CONCLUDE SESSION
SUB e30 (456) E1 PLAN CONTINUING LIAISON

e5 CONCLUDE & RELATE TO PARENTS

SUB E37 (467) E3 RELATE TO PARENTS

f1 PLAN IMPLEMENTATION SUPPORT FOR CHILD

SUB f01 (001) E4 PLAN QUICK IMPLEMENTATION OF SUPPORT